



amdt 9

~~SEQUENCE~~ LISTING

<110> Anderson, David J.
Dong, Xinzhong
Zylka, Mark
Simon, Melvin
Han, Sang-kyou

<120> PAIN SIGNALING MOLECULES

<130> CALTE.004C1

<140> US 09/849,869

<141> 2001-05-04

ai <150> US 60/222,344

<151> 2000-08-01

<150> US 60/202,027

<151> 2000-05-04

<150> US 09/704,707

<151> 2000-11-03

<150> US 60/285,493

<151> 2001-04-19

<160> 115

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1088

<212> DNA

<213> Mus Musculus

<220>

<221> CDS

<222> (115)...(1026)

<400> 1

acagaagcca gagagctaca tccagcaaga ggaatggggg aaagcagcac ctgtgcaggg 60
tttctagccc taaacacatc ggctctgcca acagcaccca caacaactaa tcca atg 117
Met
1

gac aat acc atc cct gga ggt atc aac atc acg att ctg atc cca aac 165
Asp Asn Thr Ile Pro Gly Gly Ile Asn Ile Thr Ile Leu Ile Pro Asn
5 10 15

ttg atg atc atc atc ttc gga ctg gtc ggg ctg aca gga aat ggc att 213
Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly Ile
20 25 30

gtg ttc tgg ctc ctg ggc ttc tgt ttg cac agg aac gcc ttc tca gtc 261

Val	Phe	Trp	Leu	Leu	Gly	Phe	Cys	Leu	His	Arg	Asn	Ala	Phe	Ser	Val	
	35					40					45					
tac	atc	cta	aac	tta	gct	cta	gct	gac	ttc	ttc	ttc	ctc	cta	ggt	cac	309
Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Phe	Phe	Phe	Leu	Leu	Gly	His	
	50				55				60						65	
atc	ata	gat	tcc	ata	ctg	ctt	ctt	ctc	aat	gtt	ttc	tac	cca	att	acc	357
Ile	Ile	Asp	Ser	Ile	Leu	Leu	Leu	Leu	Asn	Val	Phe	Tyr	Pro	Ile	Thr	
				70					75					80		
ttt	ctc	ttg	tgc	ttt	tac	acg	atc	atg	atg	gtt	ctc	tat	atc	gca	ggc	405
Phe	Leu	Leu	Cys	Phe	Tyr	Thr	Ile	Met	Met	Val	Leu	Tyr	Ile	Ala	Gly	
			85					90					95			
ctg	agc	atg	ctc	agt	gcc	atc	agc	act	gag	cgc	tgc	ctg	tct	gta	ctg	453
Leu	Ser	Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser	Val	Leu	
		100					105					110				
tgc	ccc	atc	tgg	tat	cac	tgt	cac	cgc	cca	gaa	cac	aca	tca	act	gtc	501
Cys	Pro	Ile	Trp	Tyr	His	Cys	His	Arg	Pro	Glu	His	Thr	Ser	Thr	Val	
	115					120					125					
atg	tgt	gct	gtc	atc	tgg	gtc	ctg	tcc	ctg	ttg	atc	tgc	att	ctg	aat	549
Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	Asn	
	130				135				140						145	
agt	tat	ttc	tgc	ggg	ttc	tta	aat	acc	caa	tat	aaa	aat	gaa	aat	ggg	597
Ser	Tyr	Phe	Cys	Gly	Phe	Leu	Asn	Thr	Gln	Tyr	Lys	Asn	Glu	Asn	Gly	
				150					155					160		
tgt	ctg	gca	ttg	aac	ttc	ttt	act	gct	gca	tac	ctg	atg	ttt	ttg	ttt	645
Cys	Leu	Ala	Leu	Asn	Phe	Phe	Thr	Ala	Ala	Tyr	Leu	Met	Phe	Leu	Phe	
			165					170					175			
gtg	gtc	ctc	tgt	ctg	tcc	agc	ctg	gct	ctg	gtg	gcc	agg	ttg	ttc	tgt	693
Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Val	Ala	Arg	Leu	Phe	Cys	
		180					185				190					
ggg	act	ggg	cag	ata	aag	ctt	acc	aga	ttg	tat	gta	acc	att	att	ctg	741
Gly	Thr	Gly	Gln	Ile	Lys	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Ile	Leu	
	195					200					205					
agc	att	ttg	gtt	ttt	ctc	ctt	tgc	gga	ttg	ccc	ttt	ggc	atc	cac	tgg	789
Ser	Ile	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Gly	Ile	His	Trp	
	210				215				220						225	
ttt	ctg	tta	ttc	aag	att	aag	gat	gat	ttt	cat	gta	ttt	gat	ctt	gga	837
Phe	Leu	Leu	Phe	Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Phe	Asp	Leu	Gly	
				230					235					240		
ttt	tat	ctg	gca	tca	gtt	gtc	ctg	act	gct	att	aat	agc	tgt	gcc	aac	885
Phe	Tyr	Leu	Ala	Ser	Val	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	Ala	Asn	
			245					250					255			
ccc	atc	att	tac	ttc	ttc	gtg	gga	tcc	ttc	agg	cat	cgg	ttg	aag	cac	933
Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Arg	Leu	Lys	His	

260

265

270

cag acc ctc aaa atg gtt ctc cag aat gca ctg caa gac act cct gag 981
 Gln Thr Leu Lys Met Val Leu Gln Asn Ala Leu Gln Asp Thr Pro Glu
 275 280 285

aca gcc aaa atc atg gtg gag atg tca aga agc aaa tca gag cca 1026
 Thr Ala Lys Ile Met Val Glu Met Ser Arg Ser Lys Ser Glu Pro
 290 295 300

tgatgaagag cctttgcctg gcccttagaa gtggctttgg ggtgagcatt gccctgctgc 1086
 ac 1088

<210> 2

<211> 304

<212> PRT

<213> Mus Musculus

<400> 2

Met Asp Asn Thr Ile Pro Gly Gly Ile Asn Ile Thr Ile Leu Ile Pro
 1 5 10 15
 Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly
 20 25 30
 Ile Val Phe Trp Leu Leu Gly Phe Cys Leu His Arg Asn Ala Phe Ser
 35 40 45
 Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Phe Phe Leu Leu Gly
 50 55 60
 His Ile Ile Asp Ser Ile Leu Leu Leu Leu Asn Val Phe Tyr Pro Ile
 65 70 75 80
 Thr Phe Leu Leu Cys Phe Tyr Thr Ile Met Met Val Leu Tyr Ile Ala
 85 90 95
 Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val
 100 105 110
 Leu Cys Pro Ile Trp Tyr His Cys His Arg Pro Glu His Thr Ser Thr
 115 120 125
 Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu
 130 135 140
 Asn Ser Tyr Phe Cys Gly Phe Leu Asn Thr Gln Tyr Lys Asn Glu Asn
 145 150 155 160
 Gly Cys Leu Ala Leu Asn Phe Phe Thr Ala Ala Tyr Leu Met Phe Leu
 165 170 175
 Phe Val Val Leu Cys Leu Ser Ser Leu Ala Leu Val Ala Arg Leu Phe
 180 185 190
 Cys Gly Thr Gly Gln Ile Lys Leu Thr Arg Leu Tyr Val Thr Ile Ile
 195 200 205
 Leu Ser Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile His
 210 215 220
 Trp Phe Leu Leu Phe Lys Ile Lys Asp Asp Phe His Val Phe Asp Leu
 225 230 235 240
 Gly Phe Tyr Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys Ala
 245 250 255
 Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys
 260 265 270
 His Gln Thr Leu Lys Met Val Leu Gln Asn Ala Leu Gln Asp Thr Pro
 275 280 285
 Glu Thr Ala Lys Ile Met Val Glu Met Ser Arg Ser Lys Ser Glu Pro
 290 295 300

<210> 3
 <211> 1234
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (137)...(1051)

<400> 3
 tctgtagtga ctgtatcttt ctttctacac aagccagtga gctacatcca acaagaggat 60
 tggggaaagc aatggtgaag catttcttgc cttaaagacc tcagcctcac caacagcacc 120
 agtgacaaca aatcca atg gac gaa acc ctc cct gga agt atc aac att agg 172
 Met Asp Glu Thr Leu Pro Gly Ser Ile Asn Ile Arg
 1 5 10

att ctg atc cca aaa ttg atg atc atc atc ttc gga ctg gtc gga ctg 220
 Ile Leu Ile Pro Lys Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu
 15 20 25

atg gga aac gcc att gtg ttc tgg ctc ctg ggc ttc cac ttg cgc aag 268
 Met Gly Asn Ala Ile Val Phe Trp Leu Leu Gly Phe His Leu Arg Lys
 30 35 40

aat gac ttc tca ctc tac atc cta aac ttg gcc cgg gct gac ttc ctt 316
 Asn Asp Phe Ser Leu Tyr Ile Leu Asn Leu Ala Arg Ala Asp Phe Leu
 45 50 55 60

ttc ctc ctc agt agt atc ata gct tcc acc ctg ttt ctt ctc aaa gtt 364
 Phe Leu Leu Ser Ser Ile Ile Ala Ser Thr Leu Phe Leu Leu Lys Val
 65 70 75

tcc tac ctc agc atc atc ttt cac ttg tgc ttt aac acc att atg atg 412
 Ser Tyr Leu Ser Ile Ile Phe His Leu Cys Phe Asn Thr Ile Met Met
 80 85 90

gtt gtc tac atc aca ggg ata agc atg ctc agt gcc atc agc act gag 460
 Val Val Tyr Ile Thr Gly Ile Ser Met Leu Ser Ala Ile Ser Thr Glu
 95 100 105

tgc tgc ctg tct gtc ctg tgc ccc acc tgg tat cgc tgc cac cgt cca 508
 Cys Cys Leu Ser Val Leu Cys Pro Thr Trp Tyr Arg Cys His Arg Pro
 110 115 120

gta cat aca tca act gtc atg tgt gct gtg atc tgg gtc cta tcc ctg 556
 Val His Thr Ser Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu
 125 130 135 140

ttg atc tgc att ctg aat agc tat ttc tgt gct gtc tta cat acc aga 604
 Leu Ile Cys Ile Leu Asn Ser Tyr Phe Cys Ala Val Leu His Thr Arg
 145 150 155

tat gat aat gac aat gag tgt ctg gca act aac atc ttt acc gcc tcg 652
 Tyr Asp Asn Asp Asn Glu Cys Leu Ala Thr Asn Ile Phe Thr Ala Ser
 160 165 170

tac atg ata ttt ttg ctt gtg gtc ctc tgt ctg tcc agc ctg gct ctg	700
Tyr Met Ile Phe Leu Leu Val Val Leu Cys Leu Ser Ser Leu Ala Leu	
175 180 185	
ctg gcc agg ttg ttc tgt ggc gct ggg cag atg aag ctt acc aga ttt	748
Leu Ala Arg Leu Phe Cys Gly Ala Gly Gln Met Lys Leu Thr Arg Phe	
190 195 200	
cat gtg acc atc ttg ctg acc ctt ttg gtt ttt ctc ctc tgc ggg ttg	796
His Val Thr Ile Leu Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu	
205 210 215 220	
ccc ttt gtc atc tac tgc atc ctg tta ttc aag att aag gat gat ttc	844
Pro Phe Val Ile Tyr Cys Ile Leu Leu Phe Lys Ile Lys Asp Asp Phe	
225 230 235	
cat gta tta gat gtt aat ttt tat cta gca tta gaa gtc ctg act gct	892
His Val Leu Asp Val Asn Phe Tyr Leu Ala Leu Glu Val Leu Thr Ala	
240 245 250	
att aac agc tgt gcc aac ccc atc atc tac ttc ttc gtg ggc tct ttc	940
Ile Asn Ser Cys Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe	
255 260 265	
aga cat cag ttg aag cac cag acc ctc aaa atg gtt ctc cag agt gca	988
Arg His Gln Leu Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Ala	
270 275 280	
ctg cag gac act cct gag aca gct gaa aac atg gta gag atg tca agt	1036
Leu Gln Asp Thr Pro Glu Thr Ala Glu Asn Met Val Glu Met Ser Ser	
285 290 295 300	
aac aaa gca gag cct tgatgaagag cctctacctg gacctcagag gtggctttgg	1091
Asn Lys Ala Glu Pro	
305	
agtgagcact gccctgctgc acttgaccac tgtccactct tctctcagct tactgatttg	1151
acatgcctca gtggtccacc aacaacttca acatctctcc actaacttag tttttctacc	1211
cctcctgaat aaaagcatta atc	1234

<210> 4

<211> 305

<212> PRT

<213> Mus musculus

<400> 4

Met Asp Glu Thr Leu Pro Gly Ser Ile Asn Ile Arg Ile Leu Ile Pro	
1 5 10 15	
Lys Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Met Gly Asn Ala	
20 25 30	
Ile Val Phe Trp Leu Leu Gly Phe His Leu Arg Lys Asn Asp Phe Ser	
35 40 45	
Leu Tyr Ile Leu Asn Leu Ala Arg Ala Asp Phe Leu Phe Leu Leu Ser	
50 55 60	
Ser Ile Ile Ala Ser Thr Leu Phe Leu Leu Lys Val Ser Tyr Leu Ser	
65 70 75 80	

Ile	Ile	Phe	His	Leu	Cys	Phe	Asn	Thr	Ile	Met	Met	Val	Val	Tyr	Ile	
			85						90					95		
Thr	Gly	Ile	Ser	Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Cys	Cys	Leu	Ser	
			100					105					110			
Val	Leu	Cys	Pro	Thr	Trp	Tyr	Arg	Cys	His	Arg	Pro	Val	His	Thr	Ser	
		115					120					125				
Thr	Val	Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	
	130					135					140					
Leu	Asn	Ser	Tyr	Phe	Cys	Ala	Val	Leu	His	Thr	Arg	Tyr	Asp	Asn	Asp	
145					150					155					160	
Asn	Glu	Cys	Leu	Ala	Thr	Asn	Ile	Phe	Thr	Ala	Ser	Tyr	Met	Ile	Phe	
				165					170					175		
Leu	Leu	Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Leu	Ala	Arg	Leu	
			180					185					190			
Phe	Cys	Gly	Ala	Gly	Gln	Met	Lys	Leu	Thr	Arg	Phe	His	Val	Thr	Ile	
		195					200					205				
Leu	Leu	Thr	Leu	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Val	Ile	
	210					215					220					
Tyr	Cys	Ile	Leu	Leu	Phe	Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Leu	Asp	
225					230				235						240	
Val	Asn	Phe	Tyr	Leu	Ala	Leu	Glu	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	
				245					250					255		
Ala	Asn	Pro	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Gln	Leu		
			260				265					270				
Lys	His	Gln	Thr	Leu	Lys	Met	Val	Leu	Gln	Ser	Ala	Leu	Gln	Asp	Thr	
		275				280					285					
Pro	Glu	Thr	Ala	Glu	Asn	Met	Val	Glu	Met	Ser	Ser	Asn	Lys	Ala	Glu	
	290					295					300					
Pro																
305																

<210> 5
 <211> 1312
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (165)...(1070)

<400> 5
 cgcggcgcgcg tcgacaagaa atattctgta gtgactgtat ccttccttct acacaagcca 60
 gcaagctaca tccagcaaga ggaatgggag aaagcaacac cagtgcaggg tttctggccc 120
 gaaacacctc agcctcgaca atgacaccca caacaacaaa ttca atg aac gaa acc 176
 Met Asn Glu Thr
 1

atc	cct	gga	agt	att	gac	atc	gag	acc	ctg	atc	cca	gac	ttg	atg	atc	224
Ile	Pro	Gly	Ser	Ile	Asp	Ile	Glu	Thr	Leu	Ile	Pro	Asp	Leu	Met	Ile	
5					10					15					20	

atc	atc	ttc	gga	ctg	gtc	ggg	ctg	aca	gga	aat	gcg	att	gtg	ttc	tgg	272
Ile	Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Ala	Ile	Val	Phe	Trp	
			25						30					35		

ctc	ctt	ggc	ttc	cgc	atg	cac	agg	act	gcc	ttc	tta	gtc	tac	atc	cta	320
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Leu	Leu	Gly	Phe	Arg	Met	His	Arg	Thr	Ala	Phe	Leu	Val	Tyr	Ile	Leu	
			40					45					50			
aac	ttg	gcc	ctg	gct	gac	ttc	ctc	ttc	ctt	ctc	tgt	cac	atc	ata	aat	368
Asn	Leu	Ala	Leu	Ala	Asp	Phe	Leu	Phe	Leu	Leu	Cys	His	Ile	Ile	Asn	
		55					60					65				
tcc	aca	gtg	gat	ctt	ctc	aag	ttt	acc	cta	ccc	aaa	gga	att	ttt	gcc	416
Ser	Thr	Val	Asp	Leu	Leu	Lys	Phe	Thr	Leu	Pro	Lys	Gly	Ile	Phe	Ala	
	70					75					80					
ttt	tgt	ttt	cac	act	atc	aaa	agg	gtt	ctc	tat	atc	aca	ggc	ctg	agc	464
Phe	Cys	Phe	His	Thr	Ile	Lys	Arg	Val	Leu	Tyr	Ile	Thr	Gly	Leu	Ser	
85					90				95						100	
atg	ctc	agt	gcc	atc	agc	act	gag	cgc	tgc	ctg	tct	gtc	ctg	tgc	ccc	512
Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser	Val	Leu	Cys	Pro	
				105					110					115		
atc	tgg	tat	cac	tgc	cgc	cgc	cca	gaa	cac	aca	tca	act	gtc	atg	tgt	560
Ile	Trp	Tyr	His	Cys	Arg	Arg	Pro	Glu	His	Thr	Ser	Thr	Val	Met	Cys	
			120					125					130			
gct	gtg	atc	tgg	gtc	ctg	tcc	ctg	ttg	atc	tgc	att	ctg	gat	ggg	tat	608
Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	Asp	Gly	Tyr	
		135					140					145				
ttc	tgc	ggg	tac	tta	gat	aac	cat	tat	ttc	aat	tac	tct	gtg	tgt	cag	656
Phe	Cys	Gly	Tyr	Leu	Asp	Asn	His	Tyr	Phe	Asn	Tyr	Ser	Val	Cys	Gln	
	150					155					160					
gca	tgg	gac	atc	ttt	atc	gga	gca	tac	ctg	atg	ttt	ttg	ttt	gta	gtc	704
Ala	Trp	Asp	Ile	Phe	Ile	Gly	Ala	Tyr	Leu	Met	Phe	Leu	Phe	Val	Val	
165					170					175					180	
ctc	tgt	ctg	tcc	acc	ctg	gct	cta	ctg	gcc	agg	ttg	ttc	tgt	ggg	gct	752
Leu	Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	Cys	Gly	Ala	
				185					190					195		
agg	aat	atg	aaa	ttt	acc	aga	tta	ttc	gtg	acc	atc	atg	ctg	acc	gtt	800
Arg	Asn	Met	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile	Met	Leu	Thr	Val	
			200					205					210			
ttg	gtt	ttt	ctt	ctc	tgt	ggg	ttg	ccc	tgg	ggc	atc	acc	tgg	ttc	ctg	848
Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Trp	Gly	Ile	Thr	Trp	Phe	Leu	
		215					220					225				
tta	ttc	tgg	att	gca	cct	ggg	gtg	ttt	gta	cta	gat	tat	agc	cct	ctt	896
Leu	Phe	Trp	Ile	Ala	Pro	Gly	Val	Phe	Val	Leu	Asp	Tyr	Ser	Pro	Leu	
	230					235					240					
ctg	gtc	cta	act	gct	att	aac	agc	tgt	gcc	aac	ccc	att	att	tac	ttc	944
Leu	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	Ala	Asn	Pro	Ile	Ile	Tyr	Phe	
245					250				255						260	
ttc	gtg	ggc	tcc	ttc	agg	caa	cgg	ttg	aat	aaa	cag	acc	ctc	aaa	atg	992
Phe	Val	Gly	Ser	Phe	Arg	Gln	Arg	Leu	Asn	Lys	Gln	Thr	Leu	Lys	Met	

265	270	275	
gtt ctc cag aaa gcc ctg cag gac act cct gag aca cct gaa aac atg			1040
Val Leu Gln Lys Ala Leu Gln Asp Thr Pro Glu Thr Pro Glu Asn Met			
280	285	290	

gtg gag atg tca aga aac aaa gca gag ccg tgatgaagag cctctgccta	1090
Val Glu Met Ser Arg Asn Lys Ala Glu Pro	
295	300

gacttcagag gtggatttgg agtgagcaact gccctgctgc acttgaccac tgtccactct	1150
cctctcagct tactgacttg acatgcctca ctggtccacc aacaccttcc aaagctctcc	1210
actgacttag tatttataacc tctcccaaac aatagcatta ttcaaaaact ataatttctg	1270
catccttctt tacattaata aaatttccat actaagttca aa	1312

<210> 6
 <211> 302
 <212> PRT
 <213> Mus musculus

<400> 6

Met Asn Glu Thr Ile Pro Gly Ser Ile Asp Ile Glu Thr Leu Ile Pro	
1 5 10 15	
Asp Leu Met Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala	
20 25 30	
Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Thr Ala Phe Leu	
35 40 45	
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys	
50 55 60	
His Ile Ile Asn Ser Thr Val Asp Leu Leu Lys Phe Thr Leu Pro Lys	
65 70 75 80	
Gly Ile Phe Ala Phe Cys Phe His Thr Ile Lys Arg Val Leu Tyr Ile	
85 90 95	
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser	
100 105 110	
Val Leu Cys Pro Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser	
115 120 125	
Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile	
130 135 140	
Leu Asp Gly Tyr Phe Cys Gly Tyr Leu Asp Asn His Tyr Phe Asn Tyr	
145 150 155 160	
Ser Val Cys Gln Ala Trp Asp Ile Phe Ile Gly Ala Tyr Leu Met Phe	
165 170 175	
Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu	
180 185 190	
Phe Cys Gly Ala Arg Asn Met Lys Phe Thr Arg Leu Phe Val Thr Ile	
195 200 205	
Met Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Ile	
210 215 220	
Thr Trp Phe Leu Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp	
225 230 235 240	
Tyr Ser Pro Leu Leu Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro	
245 250 255	
Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg Leu Asn Lys Gln	
260 265 270	
Thr Leu Lys Met Val Leu Gln Lys Ala Leu Gln Asp Thr Pro Glu Thr	
275 280 285	

Pro Glu Asn Met Val Glu Met Ser Arg Asn Lys Ala Glu Pro
 290 295 300

<210> 7
 <211> 450
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (1)...(450)

<400> 7
 ctg tgc cgg atc tgg tat cac tgc cgc cgc cca gaa cac aca tca act 48
 Leu Cys Arg Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser Thr
 1 5 10 15
 gtc atg tgt gct gtc atc tgg gtc ctg tcc ctg ttg atc tgc att ctg 96
 Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu
 20 25 30
 aat agt tat ttc tgc ggt ttc tta aat acc caa tat aaa aat gaa aat 144
 Asn Ser Tyr Phe Cys Gly Phe Leu Asn Thr Gln Tyr Lys Asn Glu Asn
 35 40 45
 ggg tgt ctg gca ttg agc ttc ttt act gct gca tac ctg atg ttt ttg 192
 Gly Cys Leu Ala Leu Ser Phe Phe Thr Ala Ala Tyr Leu Met Phe Leu
 50 55 60
 ttt gtg gtc ctc tgt ctg tcc agc ctg gct ctg gtg gcc agg ttg ttc 240
 Phe Val Val Leu Cys Leu Ser Ser Leu Ala Leu Val Ala Arg Leu Phe
 65 70 75 80
 tgt ggt gct agg aat atg aaa ttt acc aga tta ttc gtg acc atc atg 288
 Cys Gly Ala Arg Asn Met Lys Phe Thr Arg Leu Phe Val Thr Ile Met
 85 90 95
 ctg acc gtt ttg gtt ttt ctg ctc tgt ggg ttg ccc tgg ggc atc acc 336
 Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Ile Thr
 100 105 110
 tgg ttc ctg tta ttc tgg att gca cct ggt gtg ttt gta cta gat tat 384
 Trp Phe Leu Leu Phe Trp Ile Ala Pro Gly Val Phe Val Leu Asp Tyr
 115 120 125
 agc cct ctt ctg gtc cta act gct att aac agc tgt gcc aac ccc att 432
 Ser Pro Leu Leu Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro Ile
 130 135 140
 att tac ttc ttc gtc ggc 450
 Ile Tyr Phe Phe Val Gly
 145 150

<210> 8
 <211> 150

<212> PRT
 <213> Mus musculus

<400> 8

Leu	Cys	Arg	Ile	Trp	Tyr	His	Cys	Arg	Arg	Pro	Glu	His	Thr	Ser	Thr
1				5					10					15	
Val	Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu
			20					25					30		
Asn	Ser	Tyr	Phe	Cys	Gly	Phe	Leu	Asn	Thr	Gln	Tyr	Lys	Asn	Glu	Asn
		35					40					45			
Gly	Cys	Leu	Ala	Leu	Ser	Phe	Phe	Thr	Ala	Ala	Tyr	Leu	Met	Phe	Leu
	50					55					60				
Phe	Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Val	Ala	Arg	Leu	Phe
65					70				75					80	
Cys	Gly	Ala	Arg	Asn	Met	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile	Met
			85					90					95		
Leu	Thr	Val	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Trp	Gly	Ile	Thr
		100						105					110		
Trp	Phe	Leu	Leu	Phe	Trp	Ile	Ala	Pro	Gly	Val	Phe	Val	Leu	Asp	Tyr
	115					120					125				
Ser	Pro	Leu	Leu	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	Ala	Asn	Pro	Ile
	130					135					140				
Ile	Tyr	Phe	Phe	Val	Gly										
145					150										

<210> 9

<211> 459

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1)...(459)

<400> 9

ctg	tgc	ccg	acg	tgg	tat	cgc	tgc	cac	cgt	cca	gta	cat	aca	tca	act	48
Leu	Cys	Pro	Thr	Trp	Tyr	Arg	Cys	His	Arg	Pro	Val	His	Thr	Ser	Thr	
1				5					10					15		
gtc	atg	tgt	gct	gtg	atc	tgg	gtc	cta	tcc	ctg	ttg	atc	tgc	att	ctg	96
Val	Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	
			20					25					30			
aat	agc	tat	ttc	tgt	gct	gtc	tta	cat	acc	aga	tat	gat	aat	gac	aat	144
Asn	Ser	Tyr	Phe	Cys	Ala	Val	Leu	His	Thr	Arg	Tyr	Asp	Asn	Asp	Asn	
		35					40					45				
gag	tgt	ctg	gca	act	aac	atc	ttt	acc	gcc	tcg	tac	atg	ata	ttt	ttg	192
Glu	Cys	Leu	Ala	Thr	Asn	Ile	Phe	Thr	Ala	Ser	Tyr	Met	Ile	Phe	Leu	
	50					55					60					
ctt	gtg	gtc	ctc	tgt	ctg	tcc	agc	ctg	gct	ctg	ctg	gcc	agg	ttg	ttc	240
Leu	Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	
	65				70				75					80		
tgt	ggc	gct	ggg	cag	atg	aag	ctt	acc	aga	ttt	cat	gtg	acc	atc	ttg	288

Cys	Gly	Ala	Gly	Gln	Met	Lys	Leu	Thr	Arg	Phe	His	Val	Thr	Ile	Leu	
				85					90					95		
ctg	acc	ctt	ttg	gtt	ttt	ctc	ctc	tgc	ggg	ttg	ccc	ttt	gtc	atc	tac	336
Leu	Thr	Leu	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Val	Ile	Tyr	
			100					105					110			
tgc	atc	ctg	tta	ttc	aag	att	aag	gat	gat	ttc	cat	gta	tta	gat	gtt	384
Cys	Ile	Leu	Leu	Phe	Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Leu	Asp	Val	
		115					120					125				
aat	ctt	tat	cta	gca	tta	gaa	gtc	ctg	act	gct	att	aac	agc	tgt	gcc	432
Asn	Leu	Tyr	Leu	Ala	Leu	Glu	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	Ala	
	130					135					140					
aac	ccc	atc	atc	tac	ttc	ttc	gtc	gga								459
Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly								
145					150											

<210> 10
 <211> 153
 <212> PRT
 <213> Mus musculus

Leu	Cys	Pro	Thr	Trp	Tyr	Arg	Cys	His	Arg	Pro	Val	His	Thr	Ser	Thr	
1				5					10					15		
Val	Met	Cys	Ala	Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	
			20					25					30			
Asn	Ser	Tyr	Phe	Cys	Ala	Val	Leu	His	Thr	Arg	Tyr	Asp	Asn	Asp	Asn	
		35					40					45				
Glu	Cys	Leu	Ala	Thr	Asn	Ile	Phe	Thr	Ala	Ser	Tyr	Met	Ile	Phe	Leu	
	50				55						60					
Leu	Val	Val	Leu	Cys	Leu	Ser	Ser	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	
65					70				75					80		
Cys	Gly	Ala	Gly	Gln	Met	Lys	Leu	Thr	Arg	Phe	His	Val	Thr	Ile	Leu	
			85						90					95		
Leu	Thr	Leu	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Val	Ile	Tyr	
		100						105					110			
Cys	Ile	Leu	Leu	Phe	Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Leu	Asp	Val	
	115					120						125				
Asn	Leu	Tyr	Leu	Ala	Leu	Glu	Val	Leu	Thr	Ala	Ile	Asn	Ser	Cys	Ala	
	130					135					140					
Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly								
145					150											

<210> 11
 <211> 2853
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (1820)...(2734)

<400> 11

```
caaggattct acaaacccaa gtatgcaagt caacaatcta aatataatTTT gttcctttttg 60
aagtttagtgg ttcaatataa cagacaaata catcatgccc tgaaattagc tttgaacaat 120
gctaagccca taatgggaag taaaagattt gcttggttcc cactttcttc cttttctatt 180
ccgtttggac catagtggct agtgtctctt acaagatcac aagaaggagg ctctgcattt 240
atctctgagt gcctgtctgc atcctccttt ggccctggagg tcctctatga aatcctgaag 300
taagaaaaga atgttccaga ctctgatttt tcttccctaga ccaatgctat tcccttccat 360
gttgccaaca acttctcatc actctttctg tactttcttt tagctgggtg gtttcttaat 420
ctacagtatt gactgtcatg tcaaagttgg gtattttttg gcttttagata tttcttctct 480
ggctttttctc ccatccacac ataatcaaaa cactgagggtg atgacactaa gggactgctc 540
aaagggaaaag ggtgggttcc tgggcttttg gggtattaat aatttgctg tcctctgcca 600
gcctctatca actcccctaa aacacaaaaa taattgttcc tagcaggcaa gcacgacctg 660
acaattaatt aatgatcata aaaagtgcac tataaacatc tgaaaacctc ataataaaaac 720
tcaacacctt atacagttag tatgttgggt ggtctgcata aatccaacaa aactccaatg 780
gagtgggtact cagctattaa aaatgaggaa ttcacgaaat tcttagccaa atgattagaa 840
gtagaaaata tgatcctgag tgagaaaaga acaggcttgg tatgtactca ctgataagtg 900
gatactagcc caaaagctgc aaataatcag gataaaattc acagaccaca tgaacctcaa 960
taagaaggaa gaccaaagta tgggcgtttc ggtccttctt agaaggagaa caaaatactc 1020
ccaagagcaa atatggagat aaagtgtaga acaggcacta aaggaaaagt caccagaga 1080
atgttccacc tggggattca tcccatatac agttaccaa cccagacact cttatggatg 1140
ccaaggagtg aatgctgaca tagctgtttc ctaagaggcc atgccagaca cttacaaata 1200
cagaggccca agttagcaac caaccattag actgagcaca gggttcctaa tagaggagt 1260
agagaaagga ctgagggagt tgaaggggtt tgcattccca taagaaaaac aacaacatga 1320
accaacaaga cactctcccc accaaccccc tgaactccta gggactaagc catcaacaaa 1380
agagtacaca tggctccaga tgcataatgt gcagaggatg gccatatcat gcattgatgg 1440
aagaggtcct tgaacctatg aaggttctat tgatgcccc gtgtaaggga atcgaggga 1500
gagaggtgga agtgggtgtg tgggttgagc aacaccctca cagaagcagg gggaggagg 1560
atgagatggg ggtttccagg aaggggggaa gcaggaaagg ggataacatt ttaaatttaa 1620
atatagaaaa tatccaatac aaaacatttt gaacaaacaa caaaaaactc aaaaaaaca 1680
caacaacaaa aaaaagaaat taaaagttgt gttcatagt aaggcctcat ttcttctttg 1740
tgttcccagc aacaccagtg cagggtttct ggccctaaac acctcagcct cggcaatggc 1800
accacaaca acaaatcca atg aac gaa acc atc cct gga agt att gac atc 1852
```

Met Asn Glu Thr Ile Pro Gly Ser Ile Asp Ile

1

5

10

```
gag acc ctg atc cca aac ttg atg atc atc atc ttc gga ctg gtc ggg 1900
Glu Thr Leu Ile Pro Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly
```

15

20

25

```
ctg aca gga aat gtc att ttg ttt tgg ctc ctg ggc ttc cac ttg cac 1948
Leu Thr Gly Asn Val Ile Leu Phe Trp Leu Leu Gly Phe His Leu His
```

30

35

40

```
agg aat gcc ttc tta gtc tac atc cta aac ttg gcc ctg gct gac ttc 1996
Arg Asn Ala Phe Leu Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe
```

45

50

55

```
ctc ttc ctt ctc tgt cac atc ata aat tcc aca atg ctt ctt ctc aag 2044
Leu Phe Leu Leu Cys His Ile Ile Asn Ser Thr Met Leu Leu Leu Lys
```

60

65

70

75

```
gtt cac cta ccc aac aat att ttg aac cat tgc ttt gac atc atc atg 2092
Val His Leu Pro Asn Asn Ile Leu Asn His Cys Phe Asp Ile Ile Met
```

80

85

90

```
aca gtt ctc tac atc aca ggc ctg agc atg ctc agt gcc atc agc act 2140
Thr Val Leu Tyr Ile Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr
```

95					100					105						
gag	cgc	tgc	ctg	tct	gtc	ctg	tgc	ccc	atc	tgg	tat	cgg	tgc	cgc	cgc	2188
Glu	Arg	Cys	Leu	Ser	Val	Leu	Cys	Pro	Ile	Trp	Tyr	Arg	Cys	Arg	Arg	
		110					115					120				
cca	gaa	cac	aca	tca	act	gtc	ctg	tgt	gct	gtg	atc	tgg	ttc	ctg	ccc	2236
Pro	Glu	His	Thr	Ser	Thr	Val	Leu	Cys	Ala	Val	Ile	Trp	Phe	Leu	Pro	
		125					130				135					
ctg	ttg	atc	tgc	att	ctg	aat	gga	tat	ttc	tgt	cat	ttc	ttt	ggt	ccc	2284
Leu	Leu	Ile	Cys	Ile	Leu	Asn	Gly	Tyr	Phe	Cys	His	Phe	Phe	Gly	Pro	
140						145				150					155	
aaa	tat	gta	att	gac	tct	gtg	tgt	ctg	gca	acg	aac	ttc	ttt	atc	aga	2332
Lys	Tyr	Val	Ile	Asp	Ser	Val	Cys	Leu	Ala	Thr	Asn	Phe	Phe	Ile	Arg	
				160					165					170		
aca	tac	ccg	atg	ttt	ttg	ttt	ata	gtc	ctc	tgt	ctg	tcc	acc	ctg	gct	2380
Thr	Tyr	Pro	Met	Phe	Leu	Phe	Ile	Val	Leu	Cys	Leu	Ser	Thr	Leu	Ala	
			175					180					185			
ctg	ctg	gcc	agg	ttg	ttc	tgt	ggt	ggt	ggg	aag	acg	aaa	ttt	acc	aga	2428
Leu	Leu	Ala	Arg	Leu	Phe	Cys	Gly	Gly	Gly	Lys	Thr	Lys	Phe	Thr	Arg	
		190					195					200				
tta	ttc	gtg	acc	atc	atg	ctg	acc	gtt	ttg	gtt	ttt	ctt	ctc	tgt	ggg	2476
Leu	Phe	Val	Thr	Ile	Met	Leu	Thr	Val	Leu	Val	Phe	Leu	Leu	Cys	Gly	
		205					210				215					
ttg	ccc	ctg	ggc	ttc	ttc	tgg	ttt	ctg	gtg	ccg	tgg	att	aac	cgt	gat	2524
Leu	Pro	Leu	Gly	Phe	Phe	Trp	Phe	Leu	Val	Pro	Trp	Ile	Asn	Arg	Asp	
220						225				230					235	
ttc	agt	gta	cta	gat	tat	ata	ctt	ttt	cag	aca	tca	ctt	gtc	cta	act	2572
Phe	Ser	Val	Leu	Asp	Tyr	Ile	Leu	Phe	Gln	Thr	Ser	Leu	Val	Leu	Thr	
				240					245					250		
tct	gtt	aac	agc	tgt	gcc	aac	ccc	atc	att	tac	ttc	ttt	gtg	ggc	tcc	2620
Ser	Val	Asn	Ser	Cys	Ala	Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	
			255					260					265			
ttc	agg	cat	cgg	ttg	aag	cac	aag	acc	ctc	aaa	atg	gtt	ctc	cag	agt	2668
Phe	Arg	His	Arg	Leu	Lys	His	Lys	Thr	Leu	Lys	Met	Val	Leu	Gln	Ser	
		270					275					280				
gca	ttg	cag	gac	act	cct	gag	aca	cct	gaa	aac	atg	gtg	gag	atg	tca	2716
Ala	Leu	Gln	Asp	Thr	Pro	Glu	Thr	Pro	Glu	Asn	Met	Val	Glu	Met	Ser	
		285					290				295					
aga	agc	aaa	gca	gag	ccg	tgatgaagag	cctctacctg	gacctcagag								2764
Arg	Ser	Lys	Ala	Glu	Pro											
300					305											
gtggcttttg	attgagcact	gccctgctgc	acttgaccac	tgtccactct	cctctc											

<210> 12
 <211> 305
 <212> PRT
 <213> Mus musculus

<400> 12

Met	Asn	Glu	Thr	Ile	Pro	Gly	Ser	Ile	Asp	Ile	Glu	Thr	Leu	Ile	Pro
1				5					10					15	
Asn	Leu	Met	Ile	Ile	Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Val
			20					25					30		
Ile	Leu	Phe	Trp	Leu	Leu	Gly	Phe	His	Leu	His	Arg	Asn	Ala	Phe	Leu
		35					40					45			
Val	Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Phe	Leu	Phe	Leu	Leu	Cys
	50					55					60				
His	Ile	Ile	Asn	Ser	Thr	Met	Leu	Leu	Leu	Lys	Val	His	Leu	Pro	Asn
65					70					75				80	
Asn	Ile	Leu	Asn	His	Cys	Phe	Asp	Ile	Ile	Met	Thr	Val	Leu	Tyr	Ile
			85						90					95	
Thr	Gly	Leu	Ser	Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser
			100					105					110		
Val	Leu	Cys	Pro	Ile	Trp	Tyr	Arg	Cys	Arg	Arg	Pro	Glu	His	Thr	Ser
	115						120					125			
Thr	Val	Leu	Cys	Ala	Val	Ile	Trp	Phe	Leu	Pro	Leu	Leu	Ile	Cys	Ile
	130					135					140				
Leu	Asn	Gly	Tyr	Phe	Cys	His	Phe	Phe	Gly	Pro	Lys	Tyr	Val	Ile	Asp
145					150					155					160
Ser	Val	Cys	Leu	Ala	Thr	Asn	Phe	Phe	Ile	Arg	Thr	Tyr	Pro	Met	Phe
				165					170					175	
Leu	Phe	Ile	Val	Leu	Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu
			180					185					190		
Phe	Cys	Gly	Gly	Gly	Lys	Thr	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile
	195						200					205			
Met	Leu	Thr	Val	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Leu	Gly	Phe
	210					215					220				
Phe	Trp	Phe	Leu	Val	Pro	Trp	Ile	Asn	Arg	Asp	Phe	Ser	Val	Leu	Asp
225					230					235					240
Tyr	Ile	Leu	Phe	Gln	Thr	Ser	Leu	Val	Leu	Thr	Ser	Val	Asn	Ser	Cys
				245						250				255	
Ala	Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Arg	Leu
			260					265					270		
Lys	His	Lys	Thr	Leu	Lys	Met	Val	Leu	Gln	Ser	Ala	Leu	Gln	Asp	Thr
		275					280					285			
Pro	Glu	Thr	Pro	Glu	Asn	Met	Val	Glu	Met	Ser	Arg	Ser	Lys	Ala	Glu
	290					295					300				
Pro															
305															

<210> 13
 <211> 3391
 <212> DNA
 <213> Mus musculus

<220>

<221> CDS

<222> (170)...(574)

<400> 13

ccgaaaacca acaaaataga accgcgggtg cctttctcca gctgggatga aggacttgag 60
cagaaactca ttgccagctt cctccctacg cgagagccga ctgagtccca ggtccccagt 120
cttcccccg gacgttgtgc acggtgcccc ttcttgagca gccacaaca atg gag gtg 178
Met Glu Val
1

ctc ccc aag gcc ctg gag gta gac gag agg tct cca gag tcc aag gac 226
Leu Pro Lys Ala Leu Glu Val Asp Glu Arg Ser Pro Glu Ser Lys Asp
5 10 15

ctg ctg ccc agc cag aca gcc agc tcc ctg tgc atc agt tcc aga agt 274
Leu Leu Pro Ser Gln Thr Ala Ser Ser Leu Cys Ile Ser Ser Arg Ser
20 25 30 35

gag tct gtc tgg acc acc aca ccc aaa agc aac tgg gaa atc tac cac 322
Glu Ser Val Trp Thr Thr Thr Pro Lys Ser Asn Trp Glu Ile Tyr His
40 45 50

aag ccc atc atc atc atg tca gtg gga gct gcc att ctg ctc ttt ggc 370
Lys Pro Ile Ile Ile Met Ser Val Gly Ala Ala Ile Leu Leu Phe Gly
55 60 65

gtg gcc atc acc tgt gtg gcc tac atc ttg gaa gag aag cat aaa gtt 418
Val Ala Ile Thr Cys Val Ala Tyr Ile Leu Glu Glu Lys His Lys Val
70 75 80

gtg caa gtg ctc agg atg ata ggg cct gcc ttc ctg tcc ctg gga ctc 466
Val Gln Val Leu Arg Met Ile Gly Pro Ala Phe Leu Ser Leu Gly Leu
85 90 95

atg atg ctg gtg tgt ggg ctg gtg tgg gtc ccc ata atc aaa aag aag 514
Met Met Leu Val Cys Gly Leu Val Trp Val Pro Ile Ile Lys Lys Lys
100 105 110 115

cag aag caa agg cag aag tcc aac ttc ttc caa agc ctc aag ttc ttc 562
Gln Lys Gln Arg Gln Lys Ser Asn Phe Phe Gln Ser Leu Lys Phe Phe
120 125 130

ctc ctg aac cgc tgatgactgg ttgtccagaa gatctgctaa ccaataagca 614
Leu Leu Asn Arg
135

gcctcctacc ttctcttcgg gtaccacaaa gttgatccag gcaaaccctc ctcttgccc 674
tgtggacagg atagagctca gggcttcacc ctcatacaac ctagcagcat tgetgactga 734
gtctcacctg gtttccatag ctgtggatgc tgtgcccttg gatactttca ttacctcat 794
ccctggcacc tgcattcagc catcagccat cccattctct ctgccaaggg caatgtgtgc 854
atgctaggaa attctttggg ggttgactac attcccaagg agaacttgta tgttacggtt 914
gtgtgcctga tcttagattc ccatctacat ccttctggaa ccaaaagtga ccaagcagat 974
aaggctgact tcagtcccat tgggtttgac agccttggct ccctccttgg atgggacatt 1034
gactaacatt acaagagaaa ggatatgtct catgtatcac acattccaaa atctggacag 1094
tgatggggct gggggtgagg gaaacactgt ctagagtaaa ccattcctct gggagtaatc 1154
tggaacttat acagtgaagg aagttagctc ctaaataat gatattggca caagaggcaa 1214
tatgcaggct aagaggtatc aacacttccc cttgatcctc caatgcgctt cttgcagaat 1274
gcctttatat tagcaattag ccaagaacaa atgctctttg ttctaacttc cttccccacc 1334
acatctctgc gtctacacag ctccagaaca gaaggacggg aggccacaga tgtgacctgt 1394
aagatcatct ccttctcctg tcaatcaaga cctaacctga aattgaatgc catgtccgac 1454

```

tcacgctgca tgggggtttta gagataggtt cactggaaaa aaggaaatct cagcctccct 1514
cctccctggt cctccctacc aaacaagcaa gtattttatt agtttccttc tctaggccta 1574
cgttgggaac agccagaccc agtctctgat gtcattttat ttccaaaagt gaaagaggga 1634
aaaacatggc caagccaact ggcaatactc catactgagt tcttaggggt gccatgggaa 1694
cacatggatc taacaaatgt acaggaagat agattttctgg agaccatggt caccctttct 1754
gaatatgaag ggggaaggaag tgtttggaat gagcaagatg tgcaaggtag tcagcaactg 1814
ccttgcatgt ggagaagcta aggggaaaga gacaggggtg ggtaggatt cgcgatagct 1874
cccgatgct attccatcct ctcttgcta ctccccct gcttccccag gtaccttaca 1934
tccagctact ccttggtaca ctgcaggctt ctgggggtcaa tagggactgg gaggggcatc 1994
tccagagggc ctaacaagta gatataaccc aagaggtaag taccctcaaa acttcattat 2054
agtcaccaag acacctttag gcaaaagacc gggcacctat aagaaatttc caaagctggt 2114
ccaggcaagg ccaggccaga gagcagagga aggtacctag tagcaaagt aatgacaaga 2174
gctgcattgg tttaggttga ctcttcatcc ttaacctttg ggcatttggg aacactatgg 2234
caaacaacct ccaacaggtc tccagatata tcaaccattc acagtacttc tataggcagt 2294
tagaatccac cacttttggt cctgttgcat tgtgggacat tcctcggagg aagtatttgt 2354
tttgtggaat caacacacac acacacacgc acagagagag agagagagag agagagagag 2414
agagagagag agagagagag agagaaagaa agagaaagaa agaaagaaag agaaagagac 2474
tgactcccta actaaaaagt cagagtttgg gaagcctgtg gcctttcaaa gctcacttaa 2534
gaatatcatg ttctcatta agactcacat catcgagccc aggccctgca gtccacccat 2594
tccctgaata caggcagctc aggaccaacc ctgggggtgt tgaaatactg cctagtgtt 2654
ccacgaatgt ctaatgcctc catgacaggg ctttcagacc actcctttct cctgacatgg 2714
aaggacagcc ctgggggtgga gcctctcaat cttctgtgcc ttcatgaaag ggaacacaca 2774
gatgagctca cagccagctc acttggaatc cgcaccccat gcacctcatt gtcctgagag 2834
ctcattgtct gggcacagct gtgggaagac ctttgcagat ctactttca agtatgtctc 2894
aacagaaggg agtttgggga taatcacgat gccaggaat cttcaagttc tagacatctt 2954
tcatagccac atcagtacct gttccccaac cctgcccct caaggtaagt acttagcaaa 3014
caaaatcaaa gagcctttga gaaaatatcc caaatactgg ttaactccc cggccttgca 3074
ccaaactccc cacaaaagt atagtcagga agtgagcaga gtcacacca acatcttgga 3134
aaattttgcc aaagaccatt gcctcatgaa aactgggtg gggataacct gtgagtgcag 3194
ccgggttgga tgccgtgtct ctgcaacaaa gcattctggg tagtgatttc agtcatctca 3254
gaagacaaga gcaacatcca cagcaccatc ccaccggact gtattacggg cttctgtcgc 3314
tcttctgttt tggagaattt aatctaaccc aacgcctaag ggaatcaatg tcgtattgaa 3374
ctgtattctg tttaaaa 3391

```

<210> 14
 <211> 135
 <212> PRT
 <213> Mus musculus

```

<400> 14
Met Glu Val Leu Pro Lys Ala Leu Glu Val Asp Glu Arg Ser Pro Glu
1          5          10          15
Ser Lys Asp Leu Leu Pro Ser Gln Thr Ala Ser Ser Leu Cys Ile Ser
20          25          30
Ser Arg Ser Glu Ser Val Trp Thr Thr Thr Pro Lys Ser Asn Trp Glu
35          40          45
Ile Tyr His Lys Pro Ile Ile Ile Met Ser Val Gly Ala Ala Ile Leu
50          55          60
Leu Phe Gly Val Ala Ile Thr Cys Val Ala Tyr Ile Leu Glu Glu Lys
65          70          75          80
His Lys Val Val Gln Val Leu Arg Met Ile Gly Pro Ala Phe Leu Ser
85          90          95
Leu Gly Leu Met Met Leu Val Cys Gly Leu Val Trp Val Pro Ile Ile
100         105         110
Lys Lys Lys Gln Lys Gln Arg Gln Lys Ser Asn Phe Phe Gln Ser Leu
115         120         125
Lys Phe Phe Leu Leu Asn Arg

```


130

135

<210> 15
 <211> 2040
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (328)...(1293)

<400> 15

gccaggata gagtaatcat cgggtccaca gccctggcta gatgagtggg ggtgttttga 60
 tcctaattgtt attcccatgt tagcacagaa cttgtgtggc agtagagaga ggtcaggcctt 120
 cagagtcagc aagaactgga ttccaactg gatttgagga ccccccacctt ttgataggtg 180
 acttattctc tgtgagtctc tgatctgcc tctttaaatg aggaagtaaa tcccacatgg 240
 caggggtggg gggagaatca gagatcatac agctggtgat cacaactggg ttctgtttcc 300
 agggtcacca gactaggggt tctgagc atg gat cca acc atc tca acc ttg gac 354
 Met Asp Pro Thr Ile Ser Thr Leu Asp
 1 5

aca gaa ctg aca cca atc aac gga act gag gag act ctt tgc tac aag 402
 Thr Glu Leu Thr Pro Ile Asn Gly Thr Glu Glu Thr Leu Cys Tyr Lys
 10 15 20 25

cag acc ttg agc ctc acg gtg ctg acg tgc atc gtt tcc ctt gtc ggg 450
 Gln Thr Leu Ser Leu Thr Val Leu Thr Cys Ile Val Ser Leu Val Gly
 30 35 40

ctg aca gga aac gca gtt gtg ctc tgg ctc ctg ggc tgc cgc atg cgc 498
 Leu Thr Gly Asn Ala Val Val Leu Trp Leu Leu Gly Cys Arg Met Arg
 45 50 55

agg aac gcc ttc tcc atc tac atc ctc aac ttg gcc gca gca gac ttc 546
 Arg Asn Ala Phe Ser Ile Tyr Ile Leu Asn Leu Ala Ala Ala Asp Phe
 60 65 70

ctc ttc ctc agc ggc cgc ctt ata tat tcc ctg tta agc ttc atc agt 594
 Leu Phe Leu Ser Gly Arg Leu Ile Tyr Ser Leu Leu Ser Phe Ile Ser
 75 80 85

atc ccc cat acc atc tct aaa atc ctc tat cct gtg atg atg ttt tcc 642
 Ile Pro His Thr Ile Ser Lys Ile Leu Tyr Pro Val Met Met Phe Ser
 90 95 100 105

tac ttt gca ggc ctg agc ttt ctg agt gcc gtg agc acc gag cgc tgc 690
 Tyr Phe Ala Gly Leu Ser Phe Leu Ser Ala Val Ser Thr Glu Arg Cys
 110 115 120

ctg tcc gtc ctg tgg ccc atc tgg tac cgc tgc cac cgc ccc aca cac 738
 Leu Ser Val Leu Trp Pro Ile Trp Tyr Arg Cys His Arg Pro Thr His
 125 130 135

ctg tca gcg gtg gtg tgt gtc ctg ctc tgg gcc ctg tcc ctg ctg cgg 786
 Leu Ser Ala Val Val Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Arg
 140 145 150

agc atc ctg gag tgg atg tta tgt ggc ttc ctg ttc agt ggt gct gat	834
Ser Ile Leu Glu Trp Met Leu Cys Gly Phe Leu Phe Ser Gly Ala Asp	
155 160 165	
tct gct tgg tgt caa aca tca gat ttc atc aca gtc gcg tgg ctg att	882
Ser Ala Trp Cys Gln Thr Ser Asp Phe Ile Thr Val Ala Trp Leu Ile	
170 175 180 185	
ttt tta tgt gtg gtt ctc tgt ggg tcc agc ctg gtc ctg ctg atc agg	930
Phe Leu Cys Val Val Leu Cys Gly Ser Ser Leu Val Leu Leu Ile Arg	
190 195 200	
att ctc tgt gga tcc cgg aag ata ccg ctg acc agg ctg tac gtg acc	978
Ile Leu Cys Gly Ser Arg Lys Ile Pro Leu Thr Arg Leu Tyr Val Thr	
205 210 215	
atc ctg ctc aca gta ctg gtc ttc ctc ctc tgt ggc ctg ccc ttt ggc	1026
Ile Leu Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly	
220 225 230	
att cag ttt ttc cta ttt tta tgg atc cac gtg gac agg gaa gtc tta	1074
Ile Gln Phe Phe Leu Phe Leu Trp Ile His Val Asp Arg Glu Val Leu	
235 240 245	
ttt tgt cat gtt cat cta gtt tct att ttc ctg tcc gct ctt aac agc	1122
Phe Cys His Val His Leu Val Ser Ile Phe Leu Ser Ala Leu Asn Ser	
250 255 260 265	
agt gcc aac ccc atc att tac ttc ttc gtg ggc tcc ttt agg cag cgt	1170
Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg	
270 275 280	
caa aat agg cag aac ctg aag ctg gtt ctc cag agg gct ctg cag gac	1218
Gln Asn Arg Gln Asn Leu Lys Leu Val Leu Gln Arg Ala Leu Gln Asp	
285 290 295	
gcg tct gag gtg gat gaa ggt gga ggg cag ctt cct gag gaa atc ctg	1266
Ala Ser Glu Val Asp Glu Gly Gly Gly Gln Leu Pro Glu Glu Ile Leu	
300 305 310	
gag ctg tcg gga agc aga ttg gag cag tgaggaagag cctctgccct	1313
Glu Leu Ser Gly Ser Arg Leu Glu Gln	
315 320	
gtcagacagg actttgagag caacactgcc ctgccaccct tgacaattat atgcgttttt	1373
cttagccttc tgcctcagaa atgtctcagt ggttcctcaa ggtcttcaaa tagatgttta	1433
tctaacctga cagttgcggt tttcacccat ggaaagcatt agtctgacag tacaatgttt	1493
agattctcct tgatattacc aacacatttt ccctgttata tcacactgaa tctttcctac	1553
agaacacttt ttctgcaatt ttctttgtaa taaaaggagt tcctgtacaa aaccctaaaa	1613
cactctttat acttctttcc tacctgatag catcaaaaag gaagattcct tattaatctc	1673
tcagactatg ttcccctgaa aatcatgttc ccttctatga ctggaggcat tactgcagtt	1733
agaagctcga ttcttaataa gtgagttctg ctatctctac attccattga attctcagat	1793
acagagcaaa ataatgtcct tagagacaga ctctctcttc ataaaaacac tctcacctat	1853
tggttttata aaaagtcttc ccctgtcatt tggttcacagc atggtgatat gttggccttg	1913
gtttctagta aagacaactg tggccccttc cccttgagaa cttttaagtg cttatttagc	1973
tcttctgga ctaatggacc agtgaggagc ccataaatgt gcccagttc tattttggcc	2033

attggaa

2040

<210> 16
<211> 322
<212> PRT
<213> Homo sapiens

<400> 16
Met Asp Pro Thr Ile Ser Thr Leu Asp Thr Glu Leu Thr Pro Ile Asn
1 5 10 15
Gly Thr Glu Glu Thr Leu Cys Tyr Lys Gln Thr Leu Ser Leu Thr Val
20 25 30
Leu Thr Cys Ile Val Ser Leu Val Gly Leu Thr Gly Asn Ala Val Val
35 40 45
Leu Trp Leu Leu Gly Cys Arg Met Arg Arg Asn Ala Phe Ser Ile Tyr
50 55 60
Ile Leu Asn Leu Ala Ala Ala Asp Phe Leu Phe Leu Ser Gly Arg Leu
65 70 75 80
Ile Tyr Ser Leu Leu Ser Phe Ile Ser Ile Pro His Thr Ile Ser Lys
85 90 95
Ile Leu Tyr Pro Val Met Met Phe Ser Tyr Phe Ala Gly Leu Ser Phe
100 105 110
Leu Ser Ala Val Ser Thr Glu Arg Cys Leu Ser Val Leu Trp Pro Ile
115 120 125
Trp Tyr Arg Cys His Arg Pro Thr His Leu Ser Ala Val Val Cys Val
130 135 140
Leu Leu Trp Ala Leu Ser Leu Leu Arg Ser Ile Leu Glu Trp Met Leu
145 150 155 160
Cys Gly Phe Leu Phe Ser Gly Ala Asp Ser Ala Trp Cys Gln Thr Ser
165 170 175
Asp Phe Ile Thr Val Ala Trp Leu Ile Phe Leu Cys Val Val Leu Cys
180 185 190
Gly Ser Ser Leu Val Leu Leu Ile Arg Ile Leu Cys Gly Ser Arg Lys
195 200 205
Ile Pro Leu Thr Arg Leu Tyr Val Thr Ile Leu Leu Thr Val Leu Val
210 215 220
Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile Gln Phe Phe Leu Phe Leu
225 230 235 240
Trp Ile His Val Asp Arg Glu Val Leu Phe Cys His Val His Leu Val
245 250 255
Ser Ile Phe Leu Ser Ala Leu Asn Ser Ser Ala Asn Pro Ile Ile Tyr
260 265 270
Phe Phe Val Gly Ser Phe Arg Gln Arg Gln Asn Arg Gln Asn Leu Lys
275 280 285
Leu Val Leu Gln Arg Ala Leu Gln Asp Ala Ser Glu Val Asp Glu Gly
290 295 300
Gly Gly Gln Leu Pro Glu Glu Ile Leu Glu Leu Ser Gly Ser Arg Leu
305 310 315 320
Glu Gln

<210> 17
<211> 1300
<212> DNA
<213> Homo sapiens

<220>
 <221> CDS
 <222> (171)...(1160)

<400> 17

tccctggccc ttaataaatg acttaatctc ttcaagcctc tgatttcctc tcctgtaaaa 60
 caggggcggt aattaccaca taacaggctg gtcattgaaaa tcagtgaaca tgcagcaggt 120
 gctcaagtct tgtttttgtt tccaggggca ccagtggagg ttttctgagc atg gat 176
 Met Asp
 1

cca acc acc ccg gcc tgg gga aca gaa agt aca aca gtg aat gga aat 224
 Pro Thr Thr Pro Ala Trp Gly Thr Glu Ser Thr Thr Val Asn Gly Asn
 5 10 15

gac caa gcc ctt ctt ctg ctt tgt ggc aag gag acc ctg atc ccg gtc 272
 Asp Gln Ala Leu Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile Pro Val
 20 25 30

ttc ctg atc ctt ttc att gcc ctg gtc ggg ctg gta gga aac ggg ttt 320
 Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn Gly Phe
 35 40 45 50

gtg ctc tgg ctc ctg ggc ttc cgc atg cgc agg aac gcc ttc tct gtc 368
 Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe Ser Val
 55 60 65

tac gtc ctc agc ctg gcc ggg gcc gac ttc ctc ttc ctc tgc ttc cag 416
 Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys Phe Gln
 70 75 80

att ata aat tgc ctg gtg tac ctc agt aac ttc ttc tgt tcc atc tcc 464
 Ile Ile Asn Cys Leu Val Tyr Leu Ser Asn Phe Phe Cys Ser Ile Ser
 85 90 95

atc aat ttc cct agc ttc ttc acc act gtg atg acc tgt gcc tac ctt 512
 Ile Asn Phe Pro Ser Phe Phe Thr Thr Val Met Thr Cys Ala Tyr Leu
 100 105 110

gca ggc ctg agc atg ctg agc acc gtc agc acc gag cgc tgc ctg tcc 560
 Ala Gly Leu Ser Met Leu Ser Thr Val Ser Thr Glu Arg Cys Leu Ser
 115 120 125 130

gtc ctg tgg ccc atc tgg tat cgc tgc cgc cgc ccc aga cac ctg tca 608
 Val Leu Trp Pro Ile Trp Tyr Arg Cys Arg Arg Pro Arg His Leu Ser
 135 140 145

gcg gtc gtg tgt gtc ctg ctc tgg gcc ctg tcc cta ctg ctg agc atc 656
 Ala Val Val Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Leu Ser Ile
 150 155 160

ttg gaa ggg aag ttc tgt ggc ttc tta ttt agt gat ggt gac tct ggt 704
 Leu Glu Gly Lys Phe Cys Gly Phe Leu Phe Ser Asp Gly Asp Ser Gly
 165 170 175

tgg tgt cag aca ttt gat ttc atc act gca gcg tgg ctg att ttt tta 752
 Trp Cys Gln Thr Phe Asp Phe Ile Thr Ala Ala Trp Leu Ile Phe Leu

180	185	190	
ttc atg gtt ctc tgt ggg tcc agt ctg gcc ctg ctg gtc agg atc ctc			800
Phe Met Val Leu Cys Gly Ser Ser Leu Ala Leu Leu Val Arg Ile Leu			
195	200	205	210
tgt ggc tcc agg ggt ctg cca ctg acc agg ctg tac ctg acc atc ctg			848
Cys Gly Ser Arg Gly Leu Pro Leu Thr Arg Leu Tyr Leu Thr Ile Leu			
	215	220	225
ctc aca gtg ctg gtg ttc ctc ctc tgc ggc ctg ccc ttt ggc att cag			896
Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile Gln			
	230	235	240
tgg ttc cta ata tta tgg atc tgg aag gat tct gat gtc tta ttt tgt			944
Trp Phe Leu Ile Leu Trp Ile Trp Lys Asp Ser Asp Val Leu Phe Cys			
	245	250	255
cat att cat cca gtt tca gtt gtc ctg tca tct ctt aac agc agt gcc			992
His Ile His Pro Val Ser Val Val Leu Ser Ser Leu Asn Ser Ser Ala			
	260	265	270
aac ccc atc att tac ttc ttc gtg ggc tct ttt agg aag cag tgg cgg			1040
Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Lys Gln Trp Arg			
	275	280	285
ctg cag cag ccg atc ctc aag ctg gct ctc cag agg gct ctg cag gac			1088
Leu Gln Gln Pro Ile Leu Lys Leu Ala Leu Gln Arg Ala Leu Gln Asp			
	295	300	305
att gct gag gtg gat cac agt gaa gga tgc ttc cgt cag ggc acc ccg			1136
Ile Ala Glu Val Asp His Ser Glu Gly Cys Phe Arg Gln Gly Thr Pro			
	310	315	320
gag atg tcg aga agc agt ctg gtg tagagatgga cagcctctac ttccatcaga			1190
Glu Met Ser Arg Ser Ser Leu Val			
	325	330	
tatatgtggc tttgagaggc aactttgccc ctgtctgtct gatttgctga actttctcag			1250
tcctgatttt aaaacagtta agagagtcct tgtgaggatt aagtgagaca			1300

<210> 18

<211> 330

<212> PRT

<213> Homo sapiens

<400> 18

Met Asp Pro Thr Thr Pro Ala Trp Gly Thr Glu Ser Thr Thr Val Asn			
1	5	10	15
Gly Asn Asp Gln Ala Leu Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile			
	20	25	30
Pro Val Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn			
	35	40	45
Gly Phe Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe			
	50	55	60
Ser Val Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys			
65	70	75	80

135

```
<220>
<221> CDS
<222> (83) ... (943)
```

<400> 20																	
gtgtc	accaa	cagc	accc	ac	aacaa	atcca	atgg	acaa	ac	ctct	ttgg	aa	gtat	gg	acat	60	
ctgg	att	ctg	accc	gaa	act	ag	atg	atc	atc	ata	ttc	aga	ctg	gtt	ggg	atg	112
							Met	Ile	Ile	Ile	Ile	Phe	Arg	Leu	Val	Gly	Met
							1					5					10
aca	gga	aat	gcc	att	gtg	ttc	tgg	ctc	ctg	ggc	ttc	agc	ttg	cac	agg		160
Thr	Gly	Asn	Ala	Ile	Val	Phe	Trp	Leu	Leu	Gly	Phe	Ser	Leu	His	Arg		
				15						20				25			
aat	gcc	ttc	tca	gtc	tac	att	tta	aac	ttg	gcc	ctt	gct	gac	ttc	gtc		208
Asn	Ala	Phe	Ser	Val	Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Phe	Val		
			30					35					40				
ttc	ctc	ctc	tgt	cac	atc	ata	gat	tcc	atg	ctg	ctt	ctt	ctc	act	gtt		256
Phe	Leu	Leu	Cys	His	Ile	Ile	Asp	Ser	Met	Leu	Leu	Leu	Leu	Thr	Val		
		45					50					55					
ttc	tac	ccc	aac	aat	atc	ttt	tct	ggg	tac	ttt	tac	acc	atc	atg	acg		304
Phe	Tyr	Pro	Asn	Asn	Ile	Phe	Ser	Gly	Tyr	Phe	Tyr	Thr	Ile	Met	Thr		
	60					65				70							
gtt	ccc	tac	atc	gca	ggc	ctg	agc	atg	ctc	agt	gcc	atc	agc	act	gag		352
Val	Pro	Tyr	Ile	Ala	Gly	Leu	Ser	Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu		
75					80					85					90		
ctc	tgc	ctg	tct	gtc	ctg	tgc	ccc	atc	tgg	tat	cgc	tgc	cac	cac	cca		400
Leu	Cys	Leu	Ser	Val	Leu	Cys	Pro	Ile	Trp	Tyr	Arg	Cys	His	His	Pro		
				95				100						105			
gaa	cac	aca	tca	act	gtc	atg	tgt	gct	gcg	ata	tgg	gtc	ctg	ccc	ctg		448
Glu	His	Thr	Ser	Thr	Val	Met	Cys	Ala	Ala	Ile	Trp	Val	Leu	Pro	Leu		
			110					115					120				
ttg	gtc	tgc	att	ctg	aat	agg	tat	ttc	tgc	agt	ttc	tta	gat	atc	aat		496
Leu	Val	Cys	Ile	Leu	Asn	Arg	Tyr	Phe	Cys	Ser	Phe	Leu	Asp	Ile	Asn		
		125					130					135					
tat	aac	aat	gac	aaa	cag	tgt	ctg	gca	tca	aac	ttc	ttt	act	aga	gca		544
Tyr	Asn	Asn	Asp	Lys	Gln	Cys	Leu	Ala	Ser	Asn	Phe	Phe	Thr	Arg	Ala		
	140					145					150						
tac	ctg	atg	ttt	ttg	ttt	gtg	gtc	ctt	tgt	ctg	tcc	agc	atg	gct	ctg		592
Tyr	Leu	Met	Phe	Leu	Phe	Val	Val	Leu	Cys	Leu	Ser	Ser	Met	Ala	Leu		
155					160					165					170		

ctg gcc agg ttg ttc tgt ggc act ggg cag atg aag ctt acc aga ttg	640
Leu Ala Arg Leu Phe Cys Gly Thr Gly Gln Met Lys Leu Thr Arg Leu	
175 180 185	
tac gtg acc atc atg ctg act gtt ttg ggt ttt ctc ctc tgt ggg ttg	688
Tyr Val Thr Ile Met Leu Thr Val Leu Gly Phe Leu Leu Cys Gly Leu	
190 195 200	
ccc ttt gtc atc tac tac ttc ctg tta ttc aat att aag gat ggt ttt	736
Pro Phe Val Ile Tyr Tyr Phe Leu Leu Phe Asn Ile Lys Asp Gly Phe	
205 210 215	
tgt tta ttt gat ttt aga ttt tat atg tca aca cat gtc ctg act gct	784
Cys Leu Phe Asp Phe Arg Phe Tyr Met Ser Thr His Val Leu Thr Ala	
220 225 230	
att aac aac tgt gcc aac ccc ata att tac ttt ttc gag ggc tcc ttc	832
Ile Asn Asn Cys Ala Asn Pro Ile Ile Tyr Phe Phe Glu Gly Ser Phe	
235 240 245 250	
agg cat cag ttg aag cac cag acc ctc aaa atg gtt ctc cag agt gta	880
Arg His Gln Leu Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Val	
255 260 265	
ctg cag gac act cct gag ata gct gaa aat atg gtg gag atg tca aga	928
Leu Gln Asp Thr Pro Glu Ile Ala Glu Asn Met Val Glu Met Ser Arg	
270 275 280	
aac ata cca aag cca tgatgaaaag cctttgcctg gacctca	970
Asn Ile Pro Lys Pro	
285	

<210> 21
 <211> 287
 <212> PRT
 <213> Mus musculus

<400> 21
Met Ile Ile Ile Phe Arg Leu Val Gly Met Thr Gly Asn Ala Ile Val
1 5 10 15
Phe Trp Leu Leu Gly Phe Ser Leu His Arg Asn Ala Phe Ser Val Tyr
20 25 30
Ile Leu Asn Leu Ala Leu Ala Asp Phe Val Phe Leu Leu Cys His Ile
35 40 45
Ile Asp Ser Met Leu Leu Leu Leu Thr Val Phe Tyr Pro Asn Asn Ile
50 55 60
Phe Ser Gly Tyr Phe Tyr Thr Ile Met Thr Val Pro Tyr Ile Ala Gly
65 70 75 80
Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Leu Cys Leu Ser Val Leu
85 90 95
Cys Pro Ile Trp Tyr Arg Cys His His Pro Glu His Thr Ser Thr Val
100 105 110
Met Cys Ala Ala Ile Trp Val Leu Pro Leu Leu Val Cys Ile Leu Asn
115 120 125
Arg Tyr Phe Cys Ser Phe Leu Asp Ile Asn Tyr Asn Asn Asp Lys Gln

95	100	105	
gtc atg tgc ccc atc tgg tat cgc tgc cac agc cca gaa cac aca tca			387
Val Met Cys Pro Ile Trp Tyr Arg Cys His Ser Pro Glu His Thr Ser			
110	115	120	
act gtc atg tgt gct atg atc tgg gtc ctg tct cta ttg ctc tgc att			435
Thr Val Met Cys Ala Met Ile Trp Val Leu Ser Leu Leu Leu Cys Ile			
125	130	135	140
ctg tat agg tat ttc tgc ggc ttc ttg gat acc aaa tat gaa gat gac			483
Leu Tyr Arg Tyr Phe Cys Gly Phe Leu Asp Thr Lys Tyr Glu Asp Asp			
	145	150	155
tat ggg tgt cta gca atg aac ttc ctt act acc gca tac ctg atg ttt			531
Tyr Gly Cys Leu Ala Met Asn Phe Leu Thr Thr Ala Tyr Leu Met Phe			
	160	165	170
ttg ttt gta gtc ctc tgt gtg tcc agc ctg gct ctg ctg gcc agg ttg			579
Leu Phe Val Val Leu Cys Val Ser Ser Leu Ala Leu Leu Ala Arg Leu			
	175	180	185
ttc tgt ggc gct gga cgg atg aag ctt acc aga tta tac gtg acc atc			627
Phe Cys Gly Ala Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile			
	190	195	200
acg ctg acc ctt ttg gtt ttt ctc ctc tgc ggg ttg ccc tgt ggc ttc			675
Thr Leu Thr Leu Leu Val Phe Leu Leu Cys Gly Leu Pro Cys Gly Phe			
205	210	215	220
tac tgg ttc ctg tta tcc aaa att aag aat gtt ttt act gta ttt gaa			723
Tyr Trp Phe Leu Leu Ser Lys Ile Lys Asn Val Phe Thr Val Phe Glu			
	225	230	235
ttt agt ctt tat ctg gca tca gtt gtc ctg act gct att aac agc tgt			771
Phe Ser Leu Tyr Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys			
	240	245	250
gcc aac ccc atc att tac ttc ttt gtg ggc tca ttc agg cat cgg ttg			819
Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu			
	255	260	265
aag cac cag acc ctc aaa atg gtt ctc cag agt gca ctg cag gac act			867
Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr			
	270	275	280
cct gag aca cct gaa aac atg gtg gag atg tca aga aac aaa gca gag			915
Pro Glu Thr Pro Glu Asn Met Val Glu Met Ser Arg Asn Lys Ala Glu			
285	290	295	300
ctg tgatgaagag cctctgcccg gacctcagag gtggctttgg agtgagcact			968
Leu			
gccctgctgc acttggccac tgtccactct cctctcagct tactcacttg gcatgc			1024

<211> 301
 <212> PRT
 <213> Mus musculus

<400> 23

```

Met His Arg Ser Ile Ser Ile Arg Ile Leu Ile Thr Asn Leu Met Ile
1      5      10      15
Val Ile Leu Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val Phe Trp
20      25      30
Leu Leu Leu Phe Arg Leu Arg Arg Asn Ala Phe Ser Ile Tyr Ile Leu
35      40      45
Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys His Ile Ile Ala
50      55      60
Ser Thr Glu His Ile Leu Thr Phe Ser Ser Pro Asn Ser Ile Phe Ile
65      70      75      80
Asn Cys Leu Tyr Thr Phe Arg Val Leu Leu Tyr Ile Ala Gly Leu Ser
85      90      95
Met Leu Ser Ala Ile Ser Ile Glu Arg Cys Leu Ser Val Met Cys Pro
100     105     110
Ile Trp Tyr Arg Cys His Ser Pro Glu His Thr Ser Thr Val Met Cys
115     120     125
Ala Met Ile Trp Val Leu Ser Leu Leu Leu Cys Ile Leu Tyr Arg Tyr
130     135     140
Phe Cys Gly Phe Leu Asp Thr Lys Tyr Glu Asp Asp Tyr Gly Cys Leu
145     150     155     160
Ala Met Asn Phe Leu Thr Thr Ala Tyr Leu Met Phe Leu Phe Val Val
165     170     175
Leu Cys Val Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe Cys Gly Ala
180     185     190
Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile Thr Leu Thr Leu
195     200     205
Leu Val Phe Leu Leu Cys Gly Leu Pro Cys Gly Phe Tyr Trp Phe Leu
210     215     220
Leu Ser Lys Ile Lys Asn Val Phe Thr Val Phe Glu Phe Ser Leu Tyr
225     230     235     240
Leu Ala Ser Val Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro Ile
245     250     255
Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His Gln Thr
260     265     270
Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro Glu Thr Pro
275     280     285
Glu Asn Met Val Glu Met Ser Arg Asn Lys Ala Glu Leu
290     295     300

```

<210> 24
 <211> 1045
 <212> DNA
 <213> Mus musculus

<220>

<221> CDS

<222> (106)...(1020)

<400> 24

```

tttgtgttca tagtgaatga ctaatttctt ctttgtgttc ccagtgcaga gtttctggcc 60
ctaaacacct cagcctcagc aatgtcaccc acgacaacaa gtcca atg gac gaa acc 117

```

Met Asp Glu Thr
1

agc cct aga agt att gac atc gag tca ctg atc cca aac ttg atg atc	165
Ser Pro Arg Ser Ile Asp Ile Glu Ser Leu Ile Pro Asn Leu Met Ile	
5 10 15 20	
atc atc ttt gga ctg gtt ggg ctg aca gga aat gcc att gtg ctc tgg	213
Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val Leu Trp	
25 30 35	
ctc ctg ggc ttc tgc ttg cac agg aat gcc ttc tta gtc tac atc cta	261
Leu Leu Gly Phe Cys Leu His Arg Asn Ala Phe Leu Val Tyr Ile Leu	
40 45 50	
aac ttg gcc ctg gct gac ttc ctc ttc ctt ctc tgt cac ttc ata aat	309
Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys His Phe Ile Asn	
55 60 65	
tca gca atg ttt ctt ctc aag gtt cct ata ccc aac ggt atc ttt gtc	357
Ser Ala Met Phe Leu Leu Lys Val Pro Ile Pro Asn Gly Ile Phe Val	
70 75 80	
tat tgc ttt tac acc atc aaa atg gtt ctc tac atc aca ggc ctg agc	405
Tyr Cys Phe Tyr Thr Ile Lys Met Val Leu Tyr Ile Thr Gly Leu Ser	
85 90 95 100	
atg ctc agt gcc atc agc act gag cgc tgc ctt tct gtc ctg tgc ccc	453
Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Cys Pro	
105 110 115	
atc tgg tat cac tgc cgc cgc cca gaa cac aca tca act gtc atg tgt	501
Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser Thr Val Met Cys	
120 125 130	
gct gtg att tgg atc ttt tcc gtg ttg atc tgc att ctg aaa gaa tat	549
Ala Val Ile Trp Ile Phe Ser Val Leu Ile Cys Ile Leu Lys Glu Tyr	
135 140 145	
ttc tgt gat ttc ttt ggt acc aaa ttg gga aat tac tat gtg tgt cag	597
Phe Cys Asp Phe Phe Gly Thr Lys Leu Gly Asn Tyr Tyr Val Cys Gln	
150 155 160	
gca tcc aac ttc ttt atg gga gca tac cta atg ttt ttg ttt gta gtc	645
Ala Ser Asn Phe Phe Met Gly Ala Tyr Leu Met Phe Leu Phe Val Val	
165 170 175 180	
ctc tgt ctg tcc acc ctg gct ctg ctg gcc agg ttg ttc tgt ggt gct	693
Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu Phe Cys Gly Ala	
185 190 195	
gag aag atg aaa ttt acc aga tta ttc gtg acc atc atg ctg acc att	741
Glu Lys Met Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Thr Ile	
200 205 210	
ttg gtt ttt ctc ctc tgt ggg ttg cca tgg ggc ttc ttc tgg ttc ctg	789
Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Phe Phe Trp Phe Leu	

215	220	225	
tta atc tgg att aag ggt ggt ttt agt gta cta gat tat aga ctt tat			837
Leu Ile Trp Ile Lys Gly Gly Phe Ser Val Leu Asp Tyr Arg Leu Tyr			
230	235	240	
ttg gca tca att gtc cta act gtt gtt aac agc tgt gcc aac ccc atc			885
Leu Ala Ser Ile Val Leu Thr Val Val Asn Ser Cys Ala Asn Pro Ile			
245	250	255	260
att tac ttc ttc gtg gga tca ttc agg cat cgg ttg aag cac cag acc			933
Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His Gln Thr			
265	270	275	
ctc aaa atg gtt ctc cag agt gca ctg cag gac act cct gag aca cat			981
Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro Glu Thr His			
280	285	290	
gaa aac atg gtg gag atg tca aga atc aaa gca gag cag tgatgaagag			1030
Glu Asn Met Val Glu Met Ser Arg Ile Lys Ala Glu Gln			
295	300	305	
cctctgcctg gacct			1045

<210> 25
 <211> 305
 <212> PRT
 <213> Mus musculus

<400> 25
 Met Asp Glu Thr Ser Pro Arg Ser Ile Asp Ile Glu Ser Leu Ile Pro
 1 5 10 15
 Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
 20 25 30
 Ile Val Leu Trp Leu Leu Gly Phe Cys Leu His Arg Asn Ala Phe Leu
 35 40 45
 Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50 55 60
 His Phe Ile Asn Ser Ala Met Phe Leu Leu Lys Val Pro Ile Pro Asn
 65 70 75 80
 Gly Ile Phe Val Tyr Cys Phe Tyr Thr Ile Lys Met Val Leu Tyr Ile
 85 90 95
 Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser
 100 105 110
 Val Leu Cys Pro Ile Trp Tyr His Cys Arg Arg Pro Glu His Thr Ser
 115 120 125
 Thr Val Met Cys Ala Val Ile Trp Ile Phe Ser Val Leu Ile Cys Ile
 130 135 140
 Leu Lys Glu Tyr Phe Cys Asp Phe Phe Gly Thr Lys Leu Gly Asn Tyr
 145 150 155 160
 Tyr Val Cys Gln Ala Ser Asn Phe Phe Met Gly Ala Tyr Leu Met Phe
 165 170 175
 Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu
 180 185 190
 Phe Cys Gly Ala Glu Lys Met Lys Phe Thr Arg Leu Phe Val Thr Ile
 195 200 205
 Met Leu Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly Phe

210		215		220
Phe Trp Phe Leu Leu Ile	Trp Ile Lys Gly Gly	Phe Ser Val Leu Asp		
225	230	235	240	
Tyr Arg Leu Tyr Leu Ala Ser Ile Val Leu Thr Val Val Asn Ser Cys				
	245	250	255	
Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu				
	260	265	270	
Lys His Gln Thr Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr				
	275	280	285	
Pro Glu Thr His Glu Asn Met Val Glu Met Ser Arg Ile Lys Ala Glu				
290	295	300		
Gln				
305				

<210> 26
 <211> 980
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (45)...(959)

<400> 26
 tagacacctc agcatatgca atggcaccca cgaccacaaa tcca atg gac aaa acc 56
 Met Asp Lys Thr
 1

atc ctt gga agt att gac atc gag acc ctg atc cga cat ttg atg atc 104
 Ile Leu Gly Ser Ile Asp Ile Glu Thr Leu Ile Arg His Leu Met Ile
 5 10 15 20

atc atc ttc gga ctg gtc ggg ctg aca gga aat gcc att gtg ttc tgg 152
 Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val Phe Trp
 25 30 35

ctc ctg ggc ttc cac ttg cac agg aat gcc ttc tta gtc tac atc ata 200
 Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu Val Tyr Ile Ile
 40 45 50

aac ttg gcc ctg gct gac ttc ttc tat ctg ctc tgt cac atc ata aat 248
 Asn Leu Ala Leu Ala Asp Phe Phe Tyr Leu Leu Cys His Ile Ile Asn
 55 60 65

tcc ata atg ttt ctt ctc aag gtt ccc tca ccc aac att atc ttg gac 296
 Ser Ile Met Phe Leu Leu Lys Val Pro Ser Pro Asn Ile Ile Leu Asp
 70 75 80

cat tgc ttt tac acc atc atg ata gtt ctc tac atc aca ggc ctg agc 344
 His Cys Phe Tyr Thr Ile Met Ile Val Leu Tyr Ile Thr Gly Leu Ser
 85 90 95 100

atg ctc agc gcc atc agc act gag cgc tgc ctg tct gtc ctg tgc ccc 392
 Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Cys Pro
 105 110 115

atc tgg tat cgc tgc cac cgt cca gaa cac aca tca act gtc atg tgt	440
Ile Trp Tyr Arg Cys His Arg Pro Glu His Thr Ser Thr Val Met Cys	
120 125 130	
gct gtg atc tgg gta atg tcc ctg ttg atc tct att ctg aat gga tat	488
Ala Val Ile Trp Val Met Ser Leu Leu Ile Ser Ile Leu Asn Gly Tyr	
135 140 145	
ttc tgt aat ttc tct agt ccc aaa tat gta aat aac tct gtg tgt cag	536
Phe Cys Asn Phe Ser Ser Pro Lys Tyr Val Asn Asn Ser Val Cys Gln	
150 155 160	
gca tca cac atc ttt atc aga aca tac cca ata ttt ttg ttt gta ctg	584
Ala Ser His Ile Phe Ile Arg Thr Tyr Pro Ile Phe Leu Phe Val Leu	
165 170 175 180	
ctc tgt ctg tcc acc ctt gct ctg ctg gcc agg ttg ttc tct ggt gct	632
Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu Phe Ser Gly Ala	
185 190 195	
ggg aag agg aaa ttt acc aga tta ttc gtg acc atc atg ctg gcc att	680
Gly Lys Arg Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Ala Ile	
200 205 210	
ttg gtt ttt ctt ctg tgt ggg tta ccc ctg ggc ttc ttc tgg ttt ctg	728
Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe Phe Trp Phe Leu	
215 220 225	
tca ccc tgg att gag gat cgt ttc att gta cta gat tat aga ctt ttt	776
Ser Pro Trp Ile Glu Asp Arg Phe Ile Val Leu Asp Tyr Arg Leu Phe	
230 235 240	
ttt gca tca gtt gtc cta act gtt gtt aac agc tgt gcc aac ccc atc	824
Phe Ala Ser Val Val Leu Thr Val Val Asn Ser Cys Ala Asn Pro Ile	
245 250 255 260	
att tac ttc ttt gtg ggc tcc ttc agg cat cgg ttg aag caa cag acc	872
Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys Gln Gln Thr	
265 270 275	
ctc aaa atg ttt ctg cag aga gca ctg cag gac acc cct gag aca cct	920
Leu Lys Met Phe Leu Gln Arg Ala Leu Gln Asp Thr Pro Glu Thr Pro	
280 285 290	
gaa aac atg gtg gag atg tca aga agc aaa gca gag ccg tgatgaagag	969
Glu Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu Pro	
295 300 305	
cctcttccag g	980

<210> 27

<211> 305

<212> PRT

<213> Mus musculus

<400> 27

Met Asp Lys Thr Ile Leu Gly Ser Ile Asp Ile Glu Thr Leu Ile Arg

1				5					10					15			
His	Leu	Met	Ile	Ile	Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Ala		
			20					25					30				
Ile	Val	Phe	Trp	Leu	Leu	Gly	Phe	His	Leu	His	Arg	Asn	Ala	Phe	Leu		
		35					40					45					
Val	Tyr	Ile	Ile	Asn	Leu	Ala	Leu	Ala	Asp	Phe	Phe	Tyr	Leu	Leu	Cys		
	50				55						60						
His	Ile	Ile	Asn	Ser	Ile	Met	Phe	Leu	Leu	Lys	Val	Pro	Ser	Pro	Asn		
65				70					75						80		
Ile	Ile	Leu	Asp	His	Cys	Phe	Tyr	Thr	Ile	Met	Ile	Val	Leu	Tyr	Ile		
			85					90					95				
Thr	Gly	Leu	Ser	Met	Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser		
			100					105					110				
Val	Leu	Cys	Pro	Ile	Trp	Tyr	Arg	Cys	His	Arg	Pro	Glu	His	Thr	Ser		
		115					120					125					
Thr	Val	Met	Cys	Ala	Val	Ile	Trp	Val	Met	Ser	Leu	Leu	Ile	Ser	Ile		
	130					135					140						
Leu	Asn	Gly	Tyr	Phe	Cys	Asn	Phe	Ser	Ser	Pro	Lys	Tyr	Val	Asn	Asn		
145					150					155					160		
Ser	Val	Cys	Gln	Ala	Ser	His	Ile	Phe	Ile	Arg	Thr	Tyr	Pro	Ile	Phe		
			165					170						175			
Leu	Phe	Val	Leu	Leu	Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu		
			180					185					190				
Phe	Ser	Gly	Ala	Gly	Lys	Arg	Lys	Phe	Thr	Arg	Leu	Phe	Val	Thr	Ile		
		195				200						205					
Met	Leu	Ala	Ile	Leu	Val	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Leu	Gly	Phe		
	210					215				220							
Phe	Trp	Phe	Leu	Ser	Pro	Trp	Ile	Glu	Asp	Arg	Phe	Ile	Val	Leu	Asp		
225				230					235						240		
Tyr	Arg	Leu	Phe	Phe	Ala	Ser	Val	Val	Leu	Thr	Val	Val	Asn	Ser	Cys		
			245					250					255				
Ala	Asn	Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Arg	Leu		
			260					265					270				
Lys	Gln	Gln	Thr	Leu	Lys	Met	Phe	Leu	Gln	Arg	Ala	Leu	Gln	Asp	Thr		
	275					280						285					
Pro	Glu	Thr	Pro	Glu	Asn	Met	Val	Glu	Met	Ser	Arg	Ser	Lys	Ala	Glu		
	290					295					300						
Pro																	
305																	

<210> 28
 <211> 408
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(405)

<400> 28																	
atg	gag	act	ctc	ccc	aag	gtt	cta	gag	gtc	gat	gag	aag	tct	cca	gaa	48	
Met	Glu	Thr	Leu	Pro	Lys	Val	Leu	Glu	Val	Asp	Glu	Lys	Ser	Pro	Glu		
1				5					10					15			
gcc	aag	gac	ctg	ctg	ccc	agc	cag	acc	gcc	agc	tcc	ctg	tgc	atc	agc	96	
Ala	Lys	Asp	Leu	Leu	Pro	Ser	Gln	Thr	Ala	Ser	Ser	Leu	Cys	Ile	Ser		

20										25					30					
tcc	agg	agc	gag	tct	gtc	tgg	acc	acc	acc	ccc	agg	agt	aac	tgg	gaa	144				
Ser	Arg	Ser	Glu	Ser	Val	Trp	Thr	Thr	Thr	Pro	Arg	Ser	Asn	Trp	Glu					
35			40					45												
atc	tac	cgc	aag	ccc	atc	gtt	atc	atg	tca	gtg	ggc	ggt	gcc	atc	ctg	192				
Ile	Tyr	Arg	Lys	Pro	Ile	Val	Ile	Met	Ser	Val	Gly	Gly	Ala	Ile	Leu					
50			55					60												
ctt	ttc	ggc	gtg	gtc	atc	acc	tgc	ttg	gcc	tac	acc	ttg	aag	ctg	agt	240				
Leu	Phe	Gly	Val	Val	Ile	Thr	Cys	Leu	Ala	Tyr	Thr	Leu	Lys	Leu	Ser					
65			70					75			80									
gac	aag	agt	ctc	tcc	atc	ctc	aaa	atg	gta	ggg	cct	ggc	ttc	ctg	tcc	288				
Asp	Lys	Ser	Leu	Ser	Ile	Leu	Lys	Met	Val	Gly	Pro	Gly	Phe	Leu	Ser					
85			90					95												
ctg	gga	ctc	atg	atg	ctg	gtg	tgc	ggg	ctg	gtg	tgg	gtg	ccc	atc	atc	336				
Leu	Gly	Leu	Met	Met	Leu	Val	Cys	Gly	Leu	Val	Trp	Val	Pro	Ile	Ile					
100			105					110												
aaa	aag	aaa	cag	aag	cac	aga	cag	aag	tcg	aat	ttc	tta	cgc	agc	ctc	384				
Lys	Lys	Lys	Gln	Lys	His	Arg	Gln	Lys	Ser	Asn	Phe	Leu	Arg	Ser	Leu					
115			120					125												
aag	tcc	ttc	ttc	ctg	act	cgc	tga									408				
Lys	Ser	Phe	Phe	Leu	Thr	Arg														
130			135																	

<210> 29
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 29

Met	Glu	Thr	Leu	Pro	Lys	Val	Leu	Glu	Val	Asp	Glu	Lys	Ser	Pro	Glu
1				5					10					15	
Ala	Lys	Asp	Leu	Leu	Pro	Ser	Gln	Thr	Ala	Ser	Ser	Leu	Cys	Ile	Ser
20			25					30							
Ser	Arg	Ser	Glu	Ser	Val	Trp	Thr	Thr	Thr	Pro	Arg	Ser	Asn	Trp	Glu
35			40					45							
Ile	Tyr	Arg	Lys	Pro	Ile	Val	Ile	Met	Ser	Val	Gly	Gly	Ala	Ile	Leu
50			55					60							
Leu	Phe	Gly	Val	Val	Ile	Thr	Cys	Leu	Ala	Tyr	Thr	Leu	Lys	Leu	Ser
65			70					75			80				
Asp	Lys	Ser	Leu	Ser	Ile	Leu	Lys	Met	Val	Gly	Pro	Gly	Phe	Leu	Ser
85			90					95							
Leu	Gly	Leu	Met	Met	Leu	Val	Cys	Gly	Leu	Val	Trp	Val	Pro	Ile	Ile
100			105					110							
Lys	Lys	Lys	Gln	Lys	His	Arg	Gln	Lys	Ser	Asn	Phe	Leu	Arg	Ser	Leu
115			120					125							
Lys	Ser	Phe	Phe	Leu	Thr	Arg									
130			135												

<210> 30
<211> 1400
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (332)...(1297)

<400> 30
tcaggccag gatagagtaa tcatcgggtc cacagcactg gctagatgag tgggggtgtt 60
ttgatcctaa tgttattccc atgttagcac agaacttggtg tggcagtaga gagaggtcag 120
gcttcagagt cagcaagaac tggatttcaa actggatttg aggaccccca ccttttgata 180
ggtagcttat tctctgtgag tctctgatct gccctcttta aatgaggaag taaatcccac 240
atggcagggt ggtggggaga atcagagatc atacagctgg tgatcacaac tggtttctgt 300
ttccagggtc accagactgg ggtttctgag c atg gat tca acc atc cca gtc 352
Met Asp Ser Thr Ile Pro Val
1 5

ttg ggt aca gaa ctg aca cca atc aac gga cgt gag gag act cct tgc 400
Leu Gly Thr Glu Leu Thr Pro Ile Asn Gly Arg Glu Glu Thr Pro Cys
10 15 20

tac aag cag acc ctg agc ttc acg ggg ctg acg tgc atc gtt tcc ctt 448
Tyr Lys Gln Thr Leu Ser Phe Thr Gly Leu Thr Cys Ile Val Ser Leu
25 30 35

gtc gcg ctg aca gga aac gcg gtt gtg ctc tgg ctc ctg ggc tgc cgc 496
Val Ala Leu Thr Gly Asn Ala Val Val Leu Trp Leu Leu Gly Cys Arg
40 45 50 55

atg cgc agg aac gct gtc tcc atc tac atc ctc aac ctg gtc gcg gcc 544
Met Arg Arg Asn Ala Val Ser Ile Tyr Ile Leu Asn Leu Val Ala Ala
60 65 70

gac ttc ctc ttc ctt agc ggc cac att ata tgt tgc ccg tta cgc ctc 592
Asp Phe Leu Phe Leu Ser Gly His Ile Ile Cys Ser Pro Leu Arg Leu
75 80 85

atc aat atc cgc cat ccc atc tcc aaa atc ctc agt cct gtg atg acc 640
Ile Asn Ile Arg His Pro Ile Ser Lys Ile Leu Ser Pro Val Met Thr
90 95 100

ttt ccc tac ttt ata ggc cta agc atg ctg agc gcc atc agc acc gag 688
Phe Pro Tyr Phe Ile Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu
105 110 115

cgc tgc ctg tcc atc ctg tgg ccc atc tgg tac cac tgc cgc cgc ccc 736
Arg Cys Leu Ser Ile Leu Trp Pro Ile Trp Tyr His Cys Arg Arg Pro
120 125 130 135

aga tac ctg tca tgc gtc atg tgt gtc ctg ctc tgg gcc ctg tcc ctg 784
Arg Tyr Leu Ser Ser Val Met Cys Val Leu Leu Trp Ala Leu Ser Leu
140 145 150

ctg cgg agt atc ctg gag tgg atg ttc tgt gac ttc ctg ttt agt ggt 832
Leu Arg Ser Ile Leu Glu Trp Met Phe Cys Asp Phe Leu Phe Ser Gly

155							160							165							
gct gat tct gtt tgg tgt gaa acg tca gat ttc att aca atc gcg tgg	880																				
Ala Asp Ser Val Trp Cys Glu Thr Ser Asp Phe Ile Thr Ile Ala Trp																					
170 175 180																					
ctg gtt ttt tta tgt gtg gtt ctc tgt ggg tcc agc ctg gtc ctg ctg	928																				
Leu Val Phe Leu Cys Val Val Leu Cys Gly Ser Ser Leu Val Leu Leu																					
185 190 195																					
gtc agg att ctc tgt gga tcc cgg aag atg ccg ctg acc agg ctg tac	976																				
Val Arg Ile Leu Cys Gly Ser Arg Lys Met Pro Leu Thr Arg Leu Tyr																					
200 205 210 215																					
gtg acc atc ctc ctc aca gtg ctg gtc ttc ctc ctc tgt ggc ctg ccc	1024																				
Val Thr Ile Leu Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro																					
220 225 230																					
ttt ggc att cag tgg gcc ctg ttt tcc agg atc cac ctg gat tgg aaa	1072																				
Phe Gly Ile Gln Trp Ala Leu Phe Ser Arg Ile His Leu Asp Trp Lys																					
235 240 245																					
gtc tta ttt tgt cat gtg cat cta gtt tcc att ttc ctg tcc gct ctt	1120																				
Val Leu Phe Cys His Val His Leu Val Ser Ile Phe Leu Ser Ala Leu																					
250 255 260																					
aac agc agt gcc aac ccc atc att tac ttc ttc gtg ggc tcc ttt agg	1168																				
Asn Ser Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg																					
265 270 275																					
cag cgt caa aat agg cag aac ctg aag ctg gtt ctc cag agg gct ctg	1216																				
Gln Arg Gln Asn Arg Gln Asn Leu Lys Leu Val Leu Gln Arg Ala Leu																					
280 285 290 295																					
cag gac acg cct gag gtg gat gaa ggt gga ggg tgg ctt cct cag gaa	1264																				
Gln Asp Thr Pro Glu Val Asp Glu Gly Gly Gly Trp Leu Pro Gln Glu																					
300 305 310																					
acc ctg gag ctg tcg gga agc aga ttg gag cag tgaggaagaa cctctgccct	1317																				
Thr Leu Glu Leu Ser Gly Ser Arg Leu Glu Gln																					
315 320																					
gtcagacagg actttgagag caatgctgcc ctgccaccct tgacaattat atgcattttt	1377																				
cttagccttc tgcctcagaa atg	1400																				

<210> 31

<211> 322

<212> PRT

<213> Homo sapiens

<400> 31

Met Asp Ser Thr Ile Pro Val Leu Gly Thr Glu Leu Thr Pro Ile Asn	
1 5 10 15	
Gly Arg Glu Glu Thr Pro Cys Tyr Lys Gln Thr Leu Ser Phe Thr Gly	
20 25 30	
Leu Thr Cys Ile Val Ser Leu Val Ala Leu Thr Gly Asn Ala Val Val	
35 40 45	

Leu	Trp	Leu	Leu	Gly	Cys	Arg	Met	Arg	Arg	Asn	Ala	Val	Ser	Ile	Tyr
50						55					60				
Ile	Leu	Asn	Leu	Val	Ala	Ala	Asp	Phe	Leu	Phe	Leu	Ser	Gly	His	Ile
65					70					75				80	
Ile	Cys	Ser	Pro	Leu	Arg	Leu	Ile	Asn	Ile	Arg	His	Pro	Ile	Ser	Lys
			85						90					95	
Ile	Leu	Ser	Pro	Val	Met	Thr	Phe	Pro	Tyr	Phe	Ile	Gly	Leu	Ser	Met
			100					105					110		
Leu	Ser	Ala	Ile	Ser	Thr	Glu	Arg	Cys	Leu	Ser	Ile	Leu	Trp	Pro	Ile
		115					120					125			
Trp	Tyr	His	Cys	Arg	Arg	Pro	Arg	Tyr	Leu	Ser	Ser	Val	Met	Cys	Val
	130					135					140				
Leu	Leu	Trp	Ala	Leu	Ser	Leu	Leu	Arg	Ser	Ile	Leu	Glu	Trp	Met	Phe
145					150					155					160
Cys	Asp	Phe	Leu	Phe	Ser	Gly	Ala	Asp	Ser	Val	Trp	Cys	Glu	Thr	Ser
			165					170						175	
Asp	Phe	Ile	Thr	Ile	Ala	Trp	Leu	Val	Phe	Leu	Cys	Val	Val	Leu	Cys
		180						185					190		
Gly	Ser	Ser	Leu	Val	Leu	Leu	Val	Arg	Ile	Leu	Cys	Gly	Ser	Arg	Lys
	195						200					205			
Met	Pro	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Leu	Leu	Thr	Val	Leu	Val
	210					215					220				
Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Gly	Ile	Gln	Trp	Ala	Leu	Phe	Ser
225					230					235					240
Arg	Ile	His	Leu	Asp	Trp	Lys	Val	Leu	Phe	Cys	His	Val	His	Leu	Val
			245						250					255	
Ser	Ile	Phe	Leu	Ser	Ala	Leu	Asn	Ser	Ser	Ala	Asn	Pro	Ile	Ile	Tyr
		260						265					270		
Phe	Phe	Val	Gly	Ser	Phe	Arg	Gln	Arg	Gln	Asn	Arg	Gln	Asn	Leu	Lys
	275						280					285			
Leu	Val	Leu	Gln	Arg	Ala	Leu	Gln	Asp	Thr	Pro	Glu	Val	Asp	Glu	Gly
	290					295					300				
Gly	Gly	Trp	Leu	Pro	Gln	Glu	Thr	Leu	Glu	Leu	Ser	Gly	Ser	Arg	Leu
305					310					315					320
Glu	Gln														

<210> 32

<211> 1604

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (433)...(1398)

<400> 32

tgc	atg	gtg	tct	tcct	tct	gtg	ccat	ggat	ga	ccagt	cct	tag	tcac	gagt	gtg	gtc	aca	acca	60	
cct	ctt	ttg	tgt	tat	ctg	aatt	cct	ccac	ctg	aaaga	aaatt	tcag	accc	cag	gat	agatt	aa		120	
tc	atc	ggg	gtc	caa	agc	ctg	gcc	gat	gag	tggg	gggt	gtt	ttg	atc	ctaa	tg	ttatt	ccc	180	
atg	tc	agc	ac	aga	act	tgt	tgg	cagt	aga	gag	atg	tcag	gtt	cag	agt	ca	aca	aga	ac	240
tgg	att	tcaa	act	ggatt	tgg	agg	acccc	cca	cctt	tgg	ttaa	gtg	act	tatt	at	ctg	cga	gc	300	
ctct	gtt	tct	ctct	tct	tta	aat	gagg	aca	gtaa	atccc	aa	tac	ggc	agg	tggt	gggg	gag		360	
aat	cag	agat	gata	cag	ctg	gtg	atc	acat	ctg	gtt	tgt	gt	ccc	agg	gg	cacc	agact		420	
gag	ttt	ctga	gc	atg	gat	cca	acc	gtc	cca	gtc	ttc	gg	t	aca	aaa	ctg	aca		471	

Met Asp Pro Thr Val Pro Val Phe Gly Thr Lys Leu Thr

1					5					10					
cca atc aac gga cgt gag gag act cct tgc tac aat cag acc ctg agc	519														
Pro Ile Asn Gly Arg Glu Glu Thr Pro Cys Tyr Asn Gln Thr Leu Ser															
15 20 25															
ttc acg gtg ctg acg tgc atc att tcc ctt gtc gga ctg aca gga aac	567														
Phe Thr Val Leu Thr Cys Ile Ile Ser Leu Val Gly Leu Thr Gly Asn															
30 35 40 45															
gcg gta gtg ctc tgg ctc ctg ggc tac cgc atg cgc agg aac gct gtc	615														
Ala Val Val Leu Trp Leu Leu Gly Tyr Arg Met Arg Arg Asn Ala Val															
50 55 60															
tcc atc tac atc ctc aac ctg gcc gca gca gac ttc ctc ttc ctc agc	663														
Ser Ile Tyr Ile Leu Asn Leu Ala Ala Ala Asp Phe Leu Phe Leu Ser															
65 70 75															
ttc cag att ata cgt tcg cca tta cgc ctc atc aat atc agc cat ctc	711														
Phe Gln Ile Ile Arg Ser Pro Leu Arg Leu Ile Asn Ile Ser His Leu															
80 85 90															
atc cgc aaa atc ctc gtt tct gtg atg acc ttt ccc tac ttt aca ggc	759														
Ile Arg Lys Ile Leu Val Ser Val Met Thr Phe Pro Tyr Phe Thr Gly															
95 100 105															
ctg agt atg ctg agc gcc atc agc acc gag cgc tgc ctg tct gtt ctg	807														
Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu															
110 115 120 125															
tgg ccc atc tgg tac cgc tgc cgc cgc ccc aca cac ctg tca gcg gtc	855														
Trp Pro Ile Trp Tyr Arg Cys Arg Arg Pro Thr His Leu Ser Ala Val															
130 135 140															
gtg tgt gtc ctg ctc tgg ggc ctg tcc ctg ctg ttt agt atg ctg gag	903														
Val Cys Val Leu Leu Trp Gly Leu Ser Leu Leu Phe Ser Met Leu Glu															
145 150 155															
tgg agg ttc tgt gac ttc ctg ttt agt ggt gct gat tct agt tgg tgt	951														
Trp Arg Phe Cys Asp Phe Leu Phe Ser Gly Ala Asp Ser Ser Trp Cys															
160 165 170															
gaa acg tca gat ttc atc cca gtc gcg tgg ctg att ttt tta tgt gtg	999														
Glu Thr Ser Asp Phe Ile Pro Val Ala Trp Leu Ile Phe Leu Cys Val															
175 180 185															
gtt ctc tgt gtt tcc agc ctg gtc ctg ctg gtc agg atc ctc tgt gga	1047														
Val Leu Cys Val Ser Ser Leu Val Leu Leu Val Arg Ile Leu Cys Gly															
190 195 200 205															
tcc cgg aag atg ccg ctg acc agg ctg tac gtg acc atc ctg ctc aca	1095														
Ser Arg Lys Met Pro Leu Thr Arg Leu Tyr Val Thr Ile Leu Leu Thr															
210 215 220															
gtg ctg gtc ttc ctc ctc tgc ggc ctg ccc ttc ggc att ctg ggg gcc	1143														
Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly Ile Leu Gly Ala															
225 230 235															

cta att tac agg atg cac ctg aat ttg gaa gtc tta tat tgt cat gtt	1191
Leu Ile Tyr Arg Met His Leu Asn Leu Glu Val Leu Tyr Cys His Val	
240 245 250	

tat ctg gtt tgc atg tcc ctg tcc tct cta aac agt agt gcc aac ccc	1239
Tyr Leu Val Cys Met Ser Leu Ser Ser Leu Asn Ser Ser Ala Asn Pro	
255 260 265	

atc att tac ttc ttc gtg ggc tcc ttt agg cag cgt caa aat agg cag	1287
Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Gln Arg Gln Asn Arg Gln	
270 275 280 285	

aac ctg aag ctg gtt ctc cag agg gct ctg cag gac aag cct gag gtg	1335
Asn Leu Lys Leu Val Leu Gln Arg Ala Leu Gln Asp Lys Pro Glu Val	
290 295 300	

gat aaa ggt gaa ggg cag ctt cct gag gaa agc ctg gag ctg tcg gga	1383
Asp Lys Gly Glu Gly Gln Leu Pro Glu Glu Ser Leu Glu Leu Ser Gly	
305 310 315	

agc aga ttg ggg cca tgagggagag cctctgccct gtcagtcaga cgaggactttg	1438
Ser Arg Leu Gly Pro	
320	

agagcaacac tgtcctgccca cccttgacaa ttacatgcgt ttttcttagc gtttcgcctc	1498
agaaatgtct cagtggtaac tcaaggtctt caaataaatg tttatctaac ctgacagttg	1558
cagttttcac ccatggaaag cattagtctg acagtacaat gtttg	1604

<210> 33
 <211> 322
 <212> PRT
 <213> Homo sapiens

<400> 33	
Met Asp Pro Thr Val Pro Val Phe Gly Thr Lys Leu Thr Pro Ile Asn	
1 5 10 15	
Gly Arg Glu Glu Thr Pro Cys Tyr Asn Gln Thr Leu Ser Phe Thr Val	
20 25 30	
Leu Thr Cys Ile Ile Ser Leu Val Gly Leu Thr Gly Asn Ala Val Val	
35 40 45	
Leu Trp Leu Leu Gly Tyr Arg Met Arg Arg Asn Ala Val Ser Ile Tyr	
50 55 60	
Ile Leu Asn Leu Ala Ala Ala Asp Phe Leu Phe Leu Ser Phe Gln Ile	
65 70 75 80	
Ile Arg Ser Pro Leu Arg Leu Ile Asn Ile Ser His Leu Ile Arg Lys	
85 90 95	
Ile Leu Val Ser Val Met Thr Phe Pro Tyr Phe Thr Gly Leu Ser Met	
100 105 110	
Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val Leu Trp Pro Ile	
115 120 125	
Trp Tyr Arg Cys Arg Arg Pro Thr His Leu Ser Ala Val Val Cys Val	
130 135 140	
Leu Leu Trp Gly Leu Ser Leu Leu Phe Ser Met Leu Glu Trp Arg Phe	
145 150 155 160	
Cys Asp Phe Leu Phe Ser Gly Ala Asp Ser Ser Trp Cys Glu Thr Ser	
165 170 175	

Asp	Phe	Ile	Pro	Val	Ala	Trp	Leu	Ile	Phe	Leu	Cys	Val	Val	Leu	Cys
			180					185					190		
Val	Ser	Ser	Leu	Val	Leu	Leu	Val	Arg	Ile	Leu	Cys	Gly	Ser	Arg	Lys
		195					200					205			
Met	Pro	Leu	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Leu	Leu	Thr	Val	Leu	Val
	210					215					220				
Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Gly	Ile	Leu	Gly	Ala	Leu	Ile	Tyr
225					230					235					240
Arg	Met	His	Leu	Asn	Leu	Glu	Val	Leu	Tyr	Cys	His	Val	Tyr	Leu	Val
				245					250					255	
Cys	Met	Ser	Leu	Ser	Ser	Leu	Asn	Ser	Ser	Ala	Asn	Pro	Ile	Ile	Tyr
			260					265					270		
Phe	Phe	Val	Gly	Ser	Phe	Arg	Gln	Arg	Gln	Asn	Arg	Gln	Asn	Leu	Lys
		275					280					285			
Leu	Val	Leu	Gln	Arg	Ala	Leu	Gln	Asp	Lys	Pro	Glu	Val	Asp	Lys	Gly
	290					295					300				
Glu	Gly	Gln	Leu	Pro	Glu	Glu	Ser	Leu	Glu	Leu	Ser	Gly	Ser	Arg	Leu
305					310					315					320
Gly	Pro														

<210> 34
 <211> 1540
 <212> DNA
 <213> Homo sapiens

<400> 34

aggcacacct	ggggaaaggt	gcacgggggc	accacottgg	tggccagttg	atgccacca	60
aggaccagca	tagggccaaa	gacacccga	ggtcacctgc	ctcctccaca	aagatgccgt	120
cttaggcaga	gaaggtggtt	gggagaaagc	tttcatattc	aaatgagatt	cctgttatcc	180
acccatagat	aaccagctta	aagcagggtg	gggctaaaag	ctaataattt	cccccaacca	240
gataatctgc	tataaaca	taaattgcat	cttcacagcg	ggttgcat	tgagatccag	300
gacacaggtg	ttgtggggag	ttttgacatg	caggggaagt	acccccacat	gcagctgcaa	360
agtccttggg	gctcccccaa	gaaggcgggc	cagacacttg	gcagggacga	ggtgggaggc	420
agtcacggc	tcgggaatct	ccagggcctg	ggctcgca	ggtgggaagc	acctgtgggc	480
ggctctcaag	cccccatctc	attggtgccc	acggtggg	tctccccacc	ttccagctcg	540
ggctcctcgc	gaagcgcttg	ttggagcaca	gtccccagg	acctggtggg	cagcctgtgg	600
ctctccggct	gcccaccagg	aagtagatga	cggggttggc	gctgctgctt	acggacgagg	660
agaggcgtga	caagctgaag	cacaggacct	gcctctcg	cggcaggctc	aaccagtaga	720
gcacaaacca	gtagatgctc	agaggcagg	aacagatgag	gaacaccagg	acagaggcca	780
ggaccaccac	gaacagccgt	gtgggctgcc	gccgccactg	ctgggagctc	ctccgcaccc	840
agacaaagag	ggtcaggctg	gacagagtca	tactgggg	taagaccccc	atgatgagg	900
cggcctggac	catgtccacc	ctgaagcacc	gatcttcatt	gaatttcaag	aacttgctgc	960
agaaggaaga	ggtcaaccgc	ttcatcagga	gacagagtgt	ccacagcagg	ccacacaccc	1020
aggctgacag	gtgcctgggc	cggtgacact	tgaaccagat	agggaagagg	acagagagac	1080
agcgctgggt	gctgatggcc	gtcagcaggc	tcaggccac	tgtgtaggca	aagtacatca	1140
gtctcttcat	cagctcgtgg	accttgctcag	tggattgac	caggggctgg	gtttccaggc	1200
tgagcgtgga	agccatgctg	aagaggaaga	ggaggtcggc	tgccgccagg	ttgaggatat	1260
agatgcagaa	ggggttcctg	tgcattcgaa	agcccagcag	ccagatcacc	atgctgttgc	1320
ctgccatccc	gcacaggcag	gtgaacatgg	ccagggaagt	cagcaccagg	taggcctgtg	1380
gcaactgtgt	ccctctggaa	tagtttaggg	ctgactccac	ggtccactg	ctattcaaag	1440
tctggttcat	ccctacgaga	ggaagatgta	ccaatgtgaa	attctgtgtt	gctgggacca	1500
cgggggaccc	ctgggtgccc	ctcgaatttc	cagcttcaga			1540

<210> 35
 <211> 409

<213> Homo sapiens

<400> 35

Met 1	Asn	Gln	Thr	Leu 5	Asn	Ser	Ser	Gly	Thr 10	Val	Glu	Ser	Ala	Leu 15	Asn
Tyr	Ser	Arg	Gly 20	Ser	Thr	Val	His	Thr 25	Ala	Tyr	Leu	Val	Leu 30	Ser	Ser
Leu	Ala	Met 35	Phe	Thr	Cys	Leu	Cys 40	Gly	Met	Ala	Gly	Asn 45	Ser	Met	Val
Ile	Trp 50	Leu	Leu	Gly	Phe	Arg 55	Met	His	Arg	Asn 60	Pro	Phe	Cys	Ile	Tyr
Ile 65	Leu	Asn	Leu	Ala 70	Ala	Asp	Leu	Leu	Phe 75	Leu	Phe	Ser	Met	Ala 80	
Ser	Thr	Leu	Ser	Leu 85	Glu	Thr	Gln	Pro	Leu 90	Val	Asn	Thr	Thr	Asp 95	Lys
Val	His	Glu	Leu 100	Met	Lys	Arg	Leu	Met 105	Tyr	Phe	Ala	Tyr	Thr	Val	Gly
Leu	Ser	Leu 115	Leu	Thr	Ala	Ile	Ser	Thr 120	Gln	Arg	Cys	Leu	Ser	Val	Leu
Phe	Pro 130	Ile	Trp	Phe	Lys	Cys 135	His	Arg	Pro	Arg	His 140	Leu	Ser	Ala	Trp
Val 145	Cys	Gly	Leu	Leu 150	Trp	Thr	Leu	Cys	Leu	Leu	Met 155	Asn	Gly	Leu	Thr
Ser	Ser	Phe	Cys	Ser 165	Lys	Phe	Leu	Lys	Phe 170	Asn	Glu	Asp	Arg	Cys	Phe
Arg	Val	Asp	Met 180	Val	Gln	Ala	Ala	Leu 185	Ile	Met	Gly	Val	Leu	Thr	Pro
Val	Met	Thr 195	Leu	Ser	Ser	Leu	Thr 200	Leu	Phe	Val	Trp	Val 205	Arg	Arg	Ser
Ser	Gln 210	Gln	Trp	Arg	Arg	Gln 215	Pro	Thr	Arg	Leu	Phe 220	Val	Val	Val	Leu
Ala 225	Ser	Val	Leu	Val 230	Phe	Leu	Ile	Cys	Ser	Leu	Pro 235	Leu	Ser	Ile	Tyr
Trp	Phe	Val	Leu 245	Tyr	Trp	Leu	Ser	Leu	Pro 250	Pro	Glu	Met	Gln	Val	Leu
Cys	Phe	Ser	Leu 260	Ser	Arg	Leu	Ser	Ser 265	Ser	Val	Ser	Ser	Ser	Ala	Asn
Pro	Val	Ile 275	Tyr	Phe	Leu	Val	Gly 280	Ser	Arg	Arg	Ala	Thr 285	Gly	Cys	Pro
Pro	Gly 290	Pro	Trp	Gly	Leu	Cys 295	Ser	Asn	Arg	Arg	Phe 300	Ala	Arg	Ser	Pro
Ser 305	Trp	Lys	Val	Gly 310	Arg	Arg	Pro	Pro	Trp	Ala 315	Pro	Met	Arg	Trp	Gly
Leu	Glu	Ser	Arg 325	Pro	Gln	Val	Leu	Pro	Thr 330	Cys	Ala	Ser	Pro	Cys	Pro
Gly	Asp	Ser	Arg 340	Ala	Val	Ser	Cys	Leu 345	Pro	Pro	Arg	Pro	Cys 350	Gln	Val
Ser	Gly 355	Pro	Pro	Ser	Trp	Gly	Ser 360	Pro	Lys	Asp	Phe	Ala 365	Ala	Ala	Cys
Gly	Gly 370	His	Phe	Pro	Ala	Cys 375	Gln	Asn	Ser	Pro	Gln	His 380	Leu	Cys	Pro
Gly 385	Ser	His	Asn	Ala 390	Thr	Pro	Leu	Glu	Asp	Ala 395	Ile	Tyr	Leu	Phe	Ile
Ala	Asp	Tyr	Leu 405	Val	Gly	Gly	Lys	Tyr							400

<210> 36
 <211> 767
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (2)...(716)

<400> 36

c cac atg gtg gcc atc gtc ccc gac ttg ctg caa ggc cgg ctg gac ttc 49
 His Met Val Ala Ile Val Pro Asp Leu Leu Gln Gly Arg Leu Asp Phe
 1 5 10 15

ccg ggc ttc gtg cag acc agc ctg gca acg ctg cgc ttc ttc tgc tac 97
 Pro Gly Phe Val Gln Thr Ser Leu Ala Thr Leu Arg Phe Phe Cys Tyr
 20 25 30

atc gtg ggc ctg agt ctc ctg gcg gcc gtc agc gtg gag cag tgc ctg 145
 Ile Val Gly Leu Ser Leu Leu Ala Ala Val Ser Val Glu Gln Cys Leu
 35 40 45

gcc gcc ctc ttc cca gcc tgg tac tcg tgc cgc cgc cca cgc cac ctg 193
 Ala Ala Leu Phe Pro Ala Trp Tyr Ser Cys Arg Arg Pro Arg His Leu
 50 55 60

acc acc tgt gtg tgc gcc ctc acc tgg gcc ctc tgc ctg ctg ctg cac 241
 Thr Thr Cys Val Cys Ala Leu Thr Trp Ala Leu Cys Leu Leu Leu His
 65 70 75 80

ctg ctg ctc agc agc gcc tgc acc cag ttc ttc ggg gag ccc agc cgc 289
 Leu Leu Leu Ser Ser Ala Cys Thr Gln Phe Phe Gly Glu Pro Ser Arg
 85 90 95

cac ttg tgc cgg acg ctg tgg ctg gtg gca gcg gtg ctg ctg gct ctg 337
 His Leu Cys Arg Thr Leu Trp Leu Val Ala Ala Val Leu Leu Ala Leu
 100 105 110

ctg tgt tgc acc atg tgt ggg gcc agc ctt atg ctg ctg ctg cgg gtg 385
 Leu Cys Cys Thr Met Cys Gly Ala Ser Leu Met Leu Leu Leu Arg Val
 115 120 125

gag cga ggc ccc cag cgg ccc cca ccc cgg ggc ttc cct ggg ctc atc 433
 Glu Arg Gly Pro Gln Arg Pro Pro Pro Arg Gly Phe Pro Gly Leu Ile
 130 135 140

ctc ctc acc gtc ctc ctc ttc ctc ttc tgc ggc ctg ccc ttc ggc atc 481
 Leu Leu Thr Val Leu Leu Phe Leu Phe Cys Gly Leu Pro Phe Gly Ile
 145 150 155 160

tac tgg ctg tcc cgg aac ctg ctc tgg tac atc ccc cac tac ttc tac 529
 Tyr Trp Leu Ser Arg Asn Leu Leu Trp Tyr Ile Pro His Tyr Phe Tyr
 165 170 175

cac ttc agc ttc ctc atg gcc gcc gtg cac tgc gcg gcc aag ccc gtc 577
 His Phe Ser Phe Leu Met Ala Ala Val His Cys Ala Ala Lys Pro Val

180	185	190	
gtc tac ttc tgc ctg ggc agt gcc cag ggc cgc agg ctg ccc ctc cgg			625
Val Tyr Phe Cys Leu Gly Ser Ala Gln Gly Arg Arg Leu Pro Leu Arg			
195	200	205	
ctg gtc ctc cag cga gcg ctg gga gac gag gct gag ctg ggg gcc gtc			673
Leu Val Leu Gln Arg Ala Leu Gly Asp Glu Ala Glu Leu Gly Ala Val			
210	215	220	
agg gag acc tcc cgc cgg ggc ctg gtg gac ata gca gcc tga g			716
Arg Glu Thr Ser Arg Arg Gly Leu Val Asp Ile Ala Ala *			
225	230	235	
ccctgggggcc cccgacccca gctgcagccc ccgtgaggca agagggtgac t			767

<210> 37
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 37

His Met Val Ala Ile Val Pro Asp Leu Leu Gln Gly Arg Leu Asp Phe			
1	5	10	15
Pro Gly Phe Val Gln Thr Ser Leu Ala Thr Leu Arg Phe Phe Cys Tyr			
20	25	30	
Ile Val Gly Leu Ser Leu Leu Ala Ala Val Ser Val Glu Gln Cys Leu			
35	40	45	
Ala Ala Leu Phe Pro Ala Trp Tyr Ser Cys Arg Arg Pro Arg His Leu			
50	55	60	
Thr Thr Cys Val Cys Ala Leu Thr Trp Ala Leu Cys Leu Leu Leu His			
65	70	75	80
Leu Leu Leu Ser Ser Ala Cys Thr Gln Phe Phe Gly Glu Pro Ser Arg			
85	90	95	
His Leu Cys Arg Thr Leu Trp Leu Val Ala Ala Val Leu Leu Ala Leu			
100	105	110	
Leu Cys Cys Thr Met Cys Gly Ala Ser Leu Met Leu Leu Arg Val			
115	120	125	
Glu Arg Gly Pro Gln Arg Pro Pro Arg Gly Phe Pro Gly Leu Ile			
130	135	140	
Leu Leu Thr Val Leu Leu Phe Leu Phe Cys Gly Leu Pro Phe Gly Ile			
145	150	155	160
Tyr Trp Leu Ser Arg Asn Leu Leu Trp Tyr Ile Pro His Tyr Phe Tyr			
165	170	175	
His Phe Ser Phe Leu Met Ala Ala Val His Cys Ala Ala Lys Pro Val			
180	185	190	
Val Tyr Phe Cys Leu Gly Ser Ala Gln Gly Arg Arg Leu Pro Leu Arg			
195	200	205	
Leu Val Leu Gln Arg Ala Leu Gly Asp Glu Ala Glu Leu Gly Ala Val			
210	215	220	
Arg Glu Thr Ser Arg Arg Gly Leu Val Asp Ile Ala Ala			
225	230	235	

<210> 38
 <211> 1361
 <212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (48)...(1064)

<400> 38

```
tctttttttt ttttcattgc agaactgaga ttgcaccact cctgaaa atg gac tta 56
                                     Met Asp Leu
                                     1

gtc atc caa gac tgg acc att aat att aca gca ctg aaa gaa agc aat 104
Val Ile Gln Asp Trp Thr Ile Asn Ile Thr Ala Leu Lys Glu Ser Asn
      5                      10                      15

gac aat gga ata tca ttt tgt gaa gtt gtg tct cgt acc atg act ttt 152
Asp Asn Gly Ile Ser Phe Cys Glu Val Val Ser Arg Thr Met Thr Phe
  20                      25                      30                      35

ctt tcc ctc atc att gcc tta gtt ggg ctg gtt gga aat gcc aca gtg 200
Leu Ser Leu Ile Ile Ala Leu Val Gly Leu Val Gly Asn Ala Thr Val
                      40                      45                      50

tta tgg ttt ctg ggc ttc cag atg agc agg aat gcc ttc tct gtc tac 248
Leu Trp Phe Leu Gly Phe Gln Met Ser Arg Asn Ala Phe Ser Val Tyr
      55                      60                      65

atc ctc aac ctt gct ggt gct gac ttt gtc ttc atg tgc ttt caa att 296
Ile Leu Asn Leu Ala Gly Ala Asp Phe Val Phe Met Cys Phe Gln Ile
      70                      75                      80

gta cat tgt ttt tat att atc tta gac atc tac ttc atc ccc act aat 344
Val His Cys Phe Tyr Ile Ile Leu Asp Ile Tyr Phe Ile Pro Thr Asn
      85                      90                      95

ttt ttt tca tct tac act atg gtg tta aac att gct tac ctt agt ggt 392
Phe Phe Ser Ser Tyr Thr Met Val Leu Asn Ile Ala Tyr Leu Ser Gly
  100                      105                      110                      115

ctg agc atc ctc act gtc att agc act gaa cgc ttc cta tct gtc atg 440
Leu Ser Ile Leu Thr Val Ile Ser Thr Glu Arg Phe Leu Ser Val Met
                      120                      125                      130

tgg ccc atc tgg tac cgc tgc caa cgc cca agg cac aca tca gct gtc 488
Trp Pro Ile Trp Tyr Arg Cys Gln Arg Pro Arg His Thr Ser Ala Val
      135                      140                      145

ata tgt act gtg ctt tgg gtc ttg tcc ctg gtg ttg agc ctc ctg gaa 536
Ile Cys Thr Val Leu Trp Val Leu Ser Leu Val Leu Ser Leu Leu Glu
      150                      155                      160

gga aag gaa tgt ggc ttc cta tat tac act agt ggc cct ggt ttg tgt 584
Gly Lys Glu Cys Gly Phe Leu Tyr Tyr Thr Ser Gly Pro Gly Leu Cys
      165                      170                      175

aag aca ttt gat tta atc act act gca tgg tta att gtt tta ttt gtg 632
Lys Thr Phe Asp Leu Ile Thr Thr Ala Trp Leu Ile Val Leu Phe Val
```

180	185	190	195	
ggt ctc ttg gga tcc agt ctg gcc ttg gtg ctt acc atc ttc tgt ggc				680
Val Leu Leu Gly Ser Ser Leu Ala Leu Val Leu Thr Ile Phe Cys Gly	200	205	210	
tta cac aag gtt cct gtg acc agg ttg tat gtg acc att gtg ttt aca				728
Leu His Lys Val Pro Val Thr Arg Leu Tyr Val Thr Ile Val Phe Thr	215	220	225	
gtg ctt gtc ttc ctg atc ttt ggt ctg ccc tat ggg atc tac tgg ttc				776
Val Leu Val Phe Leu Ile Phe Gly Leu Pro Tyr Gly Ile Tyr Trp Phe	230	235	240	
ctc tta gag tgg att agg gaa ttt cat gat aat aaa cct tgt ggt ttt				824
Leu Leu Glu Trp Ile Arg Glu Phe His Asp Asn Lys Pro Cys Gly Phe	245	250	255	
cgt aac gtg aca ata ttt ctg tcc tgt att aac agc tgt gcc aac ccc				872
Arg Asn Val Thr Ile Phe Leu Ser Cys Ile Asn Ser Cys Ala Asn Pro	260	265	270	275
atc att tac ttc ctt gtt ggc tcc att agg cac cat cgg ttt caa cgg				920
Ile Ile Tyr Phe Leu Val Gly Ser Ile Arg His His Arg Phe Gln Arg	280	285	290	
aag act ctc aag ctt ctt ctg cag aga gcc atg caa gac tct cct gag				968
Lys Thr Leu Lys Leu Leu Leu Gln Arg Ala Met Gln Asp Ser Pro Glu	295	300	305	
gag gaa gaa tgt gga gag atg ggt tcc tca aga aga cct aga gaa ata				1016
Glu Glu Glu Cys Gly Glu Met Gly Ser Ser Arg Arg Pro Arg Glu Ile	310	315	320	
aaa act gtc tgg aag gga ctg aga gct gct ttg atc agg cat aaa tag				1064
Lys Thr Val Trp Lys Gly Leu Arg Ala Ala Leu Ile Arg His Lys *	325	330	335	
ctttgaagag aactatgttt ttatcacttt gtggcatttt cataatgttg tttagttgat				1124
gacccaaggt taactcagtt ggggaagtag tcaatgttgt agaagttgat tgatattgaa				1184
cttgttataa atactgagta cagtattttt gcagctatct tgctcagagc tttaccaact				1244
ccatttgatg ggactcctta taagctctat ggggtccagg agaggtgttg accacaattg				1304
acaaatccct cttcagaaga aaactcaaga aagtgaatg aaaagttata tttcttt				1361

<210> 39

<211> 338

<212> PRT

<213> Mus musculus

<400> 39

Met Asp Leu Val Ile Gln Asp Trp Thr Ile Asn Ile Thr Ala Leu Lys				
1	5	10	15	
Glu Ser Asn Asp Asn Gly Ile Ser Phe Cys Glu Val Val Ser Arg Thr				
20	25	30		
Met Thr Phe Leu Ser Leu Ile Ile Ala Leu Val Gly Leu Val Gly Asn				
35	40	45		
Ala Thr Val Leu Trp Phe Leu Gly Phe Gln Met Ser Arg Asn Ala Phe				

50		55		60
Ser Val Tyr Ile Leu	Asn Leu Ala Gly Ala	Asp Phe Val Phe Met Cys		
65	70	75	80	
Phe Gln Ile Val His	Cys Phe Tyr Ile Ile	Leu Asp Ile Tyr Phe Ile		
	85	90	95	
Pro Thr Asn Phe Ser	Ser Tyr Thr Met Val	Leu Asn Ile Ala Tyr		
	100	105	110	
Leu Ser Gly Leu Ser	Ile Leu Thr Val Ile	Ser Thr Glu Arg Phe Leu		
	115	120	125	
Ser Val Met Trp Pro	Ile Trp Tyr Arg Cys	Gln Arg Pro Arg His Thr		
	130	135	140	
Ser Ala Val Ile Cys	Thr Val Leu Trp Val	Leu Ser Leu Val Leu Ser		
145	150	155	160	
Leu Leu Glu Gly Lys	Glu Cys Gly Phe Leu	Tyr Tyr Thr Ser Gly Pro		
	165	170	175	
Gly Leu Cys Lys Thr	Phe Asp Leu Ile Thr	Thr Ala Trp Leu Ile Val		
	180	185	190	
Leu Phe Val Val Leu	Leu Gly Ser Ser Leu	Ala Leu Val Leu Thr Ile		
	195	200	205	
Phe Cys Gly Leu His	Lys Val Pro Val Thr	Arg Leu Tyr Val Thr Ile		
	210	215	220	
Val Phe Thr Val Leu	Val Phe Leu Ile Phe	Gly Leu Pro Tyr Gly Ile		
225	230	235	240	
Tyr Trp Phe Leu Leu	Glu Trp Ile Arg Glu	Phe His Asp Asn Lys Pro		
	245	250	255	
Cys Gly Phe Arg Asn	Val Thr Ile Phe Leu	Ser Cys Ile Asn Ser Cys		
	260	265	270	
Ala Asn Pro Ile Ile	Tyr Phe Leu Val Gly	Ser Ile Arg His His Arg		
	275	280	285	
Phe Gln Arg Lys Thr	Leu Lys Leu Leu Leu	Gln Arg Ala Met Gln Asp		
	290	295	300	
Ser Pro Glu Glu Glu	Glu Cys Gly Glu Met	Gly Ser Ser Arg Arg Pro		
305	310	315	320	
Arg Glu Ile Lys Thr	Val Trp Lys Gly Leu	Arg Ala Ala Leu Ile Arg		
	325	330	335	

His Lys

<210> 40
 <211> 1278
 <212> DNA
 <213> Mus musculus

<400> 40
 atttcctaata caagaatcta agcacctcag cctggaaaac gaacatcaca gtgctgaatg 60
 gaagctacta catcgatact tcagtttggtg tcaccaggaa ccaagccatg attttgcttt 120
 ccatcatcat ttccctgggtt gggatgggac taaatgccat agtgctgtgg ttccctgggca 180
 tccgtatgca cacgaatgcc ttactgtct acattctcaa cctggctatg gctgactttc 240
 ttacctgtg ctctcagttt gtaatttgtc ttcttattgc cttttatata ttctactcaa 300
 ttgacatcaa catccctttg gttctttatg ttgtgccaat atttgcttat ctttcagggtc 360
 tgagcattct cagcaccatt agcattgagc gctgcttggtc tgtaatatgg cccatttggt 420
 atcgctgtaa acgtccaaga cacacatcag ctatcacatg ttttggtgctt tgggttatgt 480
 ccttattggtt ggggtctctg gaagggaagg catgtgggtt actgtttaat agctttgact 540
 cttattgggtg tgaaacattt gatgttatca ctaatatatg gtcagttggt ttttttggtg 600
 ttctctgtgg gtctagcctc accctgcttg tcaggatctt ctgtggctca cagcgaattc 660
 ctatgaccag gctgtatgtg actattacac tcacagtctt ggtcttctctg atctttgggtc 720

```

ttccctttgg gatctattgg atactctatc agtggattag caatttttat tatgttgaaa 780
tttgtaattt ttatcttgag atactattcc tatcctgtgt taacagctgt atgaacccca 840
tcattttatt ccttgttggc tccattaggc accgaagggt caggcggaag actctcaagc 900
tactttctgca gagagccatg caagacaccc ctgaggagga acaaagtgga aataagagtt 960
cttcagaaca ccctgaagaa ctggaaactg ttcagagctg cagctgacaa ctgcttgatc 1020
agacaaaaat ggttttgatg gaaatacttt ttcttatccg tgtggaccat ttttacaacc 1080
tttattcagt ttgttatctc atcttcaatt gtttaattag gacaataatt tttgtaaaag 1140
ttgagagaaa tgggtcttgt catactaata ctgaatgtag catttctgaa gctgtgttac 1200
ttagggattt accatctcct tttcatggga ctcttgtaa gtattctgtg gtagagaact 1260
tctcctattg ttgacaaa                                1278

```

<210> 41

<211> 338

<212> PRT

<213> Mus musculus

<400> 41

```

Met Ser Gly Asp Phe Leu Ile Lys Asn Leu Ser Thr Ser Ala Trp Lys
 1           5           10           15
Thr Asn Ile Thr Val Leu Asn Gly Ser Tyr Tyr Ile Asp Thr Ser Val
 20           25           30
Cys Val Thr Arg Asn Gln Ala Met Ile Leu Leu Ser Ile Ile Ile Ser
 35           40           45
Leu Val Gly Met Gly Leu Asn Ala Ile Val Leu Trp Phe Leu Gly Ile
 50           55           60
Arg Met His Thr Asn Ala Phe Thr Val Tyr Ile Leu Asn Leu Ala Met
 65           70           75           80
Ala Asp Phe Leu Tyr Leu Cys Ser Gln Phe Val Ile Cys Leu Leu Ile
 85           90           95
Ala Phe Tyr Ile Phe Tyr Ser Ile Asp Ile Asn Ile Pro Leu Val Leu
100          105          110
Tyr Val Val Pro Ile Phe Ala Tyr Leu Ser Gly Leu Ser Ile Leu Ser
115          120          125
Thr Ile Ser Ile Glu Arg Cys Leu Ser Val Ile Trp Pro Ile Trp Tyr
130          135          140
Arg Cys Lys Arg Pro Arg His Thr Ser Ala Ile Thr Cys Phe Val Leu
145          150          155          160
Trp Val Met Ser Leu Leu Gly Leu Leu Glu Gly Lys Ala Cys Gly
165          170          175
Leu Leu Phe Asn Ser Phe Asp Ser Tyr Trp Cys Glu Thr Phe Asp Val
180          185          190
Ile Thr Asn Ile Trp Ser Val Val Phe Phe Gly Val Leu Cys Gly Ser
195          200          205
Ser Leu Thr Leu Leu Val Arg Ile Phe Cys Gly Ser Gln Arg Ile Pro
210          215          220
Met Thr Arg Leu Tyr Val Thr Ile Thr Leu Thr Val Leu Val Phe Leu
225          230          235          240
Ile Phe Gly Leu Pro Phe Gly Ile Tyr Trp Ile Leu Tyr Gln Trp Ile
245          250          255
Ser Asn Phe Tyr Tyr Val Glu Ile Cys Asn Phe Tyr Leu Glu Ile Leu
260          265          270
Phe Leu Ser Cys Val Asn Ser Cys Met Asn Pro Ile Ile Tyr Phe Leu
275          280          285
Val Gly Ser Ile Arg His Arg Arg Phe Arg Arg Lys Thr Leu Lys Leu
290          295          300
Leu Leu Gln Arg Ala Met Gln Asp Thr Pro Glu Glu Glu Ser Gly
305          310          315          320

```

Asn Lys Ser Ser Ser Glu His Pro Glu Glu Leu Glu Thr Val Gln Ser
 325 330 335
 Cys Ser

<210> 42
 <211> 1009
 <212> DNA
 <213> Mus musculus

<400> 42
 ttttctaagc atggctctaa gaacctcact aataaccacc acagcaccgg ataaaaccag 60
 ccttccaatt tcaatttgta tcatcaagtt ccaagtcacg aatttgcttt ccatcaccat 120
 ttcccctggt gggatgggtac tgaatatcat agtgctgtgg ttccctgggct tccagatatg 180
 caggaatgcc ttctctgcct acatcctcaa cctggctgtg gctgattttc tcttctctgtg 240
 ttctcattct atattttctt ttcttattgt ctgcaaactg cactatTTTT tattctacat 300
 tagacagctt ttggatactg tgacaatggt tgcttatggt tttggcctga gcattaccac 360
 catcattagc attgagtgtt gcctgtctat catgtggccc atctgggtatc actgccaacg 420
 tccaagacac acatcagctg tcatTTTgtgt cttgcttttg gctctatctc tgcgtgtttcc 480
 tgctctgcag atggaaaaat gtagcgtcct gtttaatact tttgaatatt cttgggtgtgg 540
 gataatcaat ataatctctg gtgcatgggt agttgtttta tttgtgggtc tctgtgggtt 600
 cagcctcatc ctgctcctca ggatctcctg tggatcacag cagattcctg tgaccaggct 660
 gaatgtaact attgactca gagtgtact cctcctgac tttggtattc cctttgggat 720
 cttctggata gttgacaaat ggaatgaaga aaattttttc gttagagctt gtgggttttc 780
 acatcatata ctatacgtat actgtattaa catctgtgtc aatgctacca tatacttct 840
 tgttggctcc attaggcatg gcaagtttca gaagatgact ctgaagctga ttctgcagag 900
 agctatacag ggcacccccg aggaagaagg tggagagagg ggtccttaag gaaatactga 960
 agaactggga acagtctagt gcagcaaccg agagctgctt taataataa 1009

<210> 43
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 43
 Met Ala Leu Arg Thr Ser Leu Ile Thr Thr Thr Ala Pro Asp Lys Thr
 1 5 10 15
 Ser Leu Pro Ile Ser Ile Cys Ile Ile Lys Phe Gln Val Met Asn Leu
 20 25 30
 Leu Ser Ile Thr Ile Ser Pro Val Gly Met Val Leu Asn Ile Ile Val
 35 40 45
 Leu Trp Phe Leu Gly Phe Gln Ile Cys Arg Asn Ala Phe Ser Ala Tyr
 50 55 60
 Ile Leu Asn Leu Ala Val Ala Asp Phe Leu Phe Leu Cys Ser His Ser
 65 70 75 80
 Ile Phe Ser Phe Leu Ile Val Cys Lys Leu His Tyr Phe Leu Phe Tyr
 85 90 95
 Ile Arg Gln Leu Leu Asp Thr Val Thr Met Phe Ala Tyr Val Phe Gly
 100 105 110
 Leu Ser Ile Thr Thr Ile Ile Ser Ile Glu Cys Cys Leu Ser Ile Met
 115 120 125
 Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala Val
 130 135 140
 Ile Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Phe Pro Ala Leu Gln
 145 150 155 160
 Met Glu Lys Cys Ser Val Leu Phe Asn Thr Phe Glu Tyr Ser Trp Cys

				165					170					175			
Gly	Ile	Ile	Asn	Ile	Ile	Ser	Gly	Ala	Trp	Leu	Val	Val	Leu	Phe	Val		
			180					185					190				
Val	Leu	Cys	Gly	Phe	Ser	Leu	Ile	Leu	Leu	Leu	Arg	Ile	Ser	Cys	Gly		
		195					200					205					
Ser	Gln	Gln	Ile	Pro	Val	Thr	Arg	Leu	Asn	Val	Thr	Ile	Ala	Leu	Arg		
	210					215					220						
Val	Leu	Leu	Leu	Leu	Ile	Phe	Gly	Ile	Pro	Phe	Gly	Ile	Phe	Trp	Ile		
225					230					235					240		
Val	Asp	Lys	Trp	Asn	Glu	Glu	Asn	Phe	Phe	Val	Arg	Ala	Cys	Gly	Phe		
			245					250					255				
Ser	His	His	Ile	Leu	Tyr	Val	Tyr	Cys	Ile	Asn	Ile	Cys	Val	Asn	Ala		
		260						265				270					
Thr	Ile	Tyr	Phe	Leu	Val	Gly	Ser	Ile	Arg	His	Gly	Lys	Phe	Gln	Lys		
	275					280					285						
Met	Thr	Leu	Lys	Leu	Ile	Leu	Gln	Arg	Ala	Ile	Gln	Gly	Thr	Pro	Glu		
	290					295					300						
Glu	Glu	Gly	Gly	Glu	Arg	Gly	Pro										
305					310												

<210> 44
 <211> 1219
 <212> DNA
 <213> Mus musculus

<400> 44
 tttatggacc tgtgccagat attcctacat aatcacatgg tcctgactga gactatcttg 60
 tgttcatatc tcgatttctt tgcaggaatg ccagtggaag attcctaagc atgggtacaa 120
 ccaccctggc ctggaacatt aacaacaccg ctgaaaatgg aagttacact gaaatgttct 180
 cctgtatcac caagttcaat accctgaatt ttcttactgt catcatagct gtgggtggcc 240
 tggcaggaaa cggcatagtg ctatggcttc tagccttcca cctgcatagg aatgccttct 300
 ctgtctatgt cctcaatctg gctgggtgctg atttcttgta ccttttctact caagttgtgc 360
 attccctgga atgtgtcctt cagttagata ataactcctt ttatattctc ctcatgttaa 420
 caatgtttgc ttaccttgca ggtttgtgta tgattgcagc catcagtgct gaacgctgcc 480
 tatctgttat gtggcctatc tggatcact gccaaagacc aagacacaca tcagccatca 540
 tgtgtgctct ggtctgggtt tcctctctat tgttgagcct cgtggtaggg ctaggctgtg 600
 gttttctggt cagttattat gattattatt tctgtattac tttgaatttt atcactgctg 660
 catttttaat agtggtatct gtgggtcttt ctgtatctag cctggccctg ttggtgaaga 720
 ttgtgtgggg gtcacacagg attcctgtga ccaggttctt tgtgaccatt gctctcacag 780
 tgggtggtctt catatacttt ggcattgcct ttggtatctg ctggttcctc ttatcaagga 840
 ttatggagtt tgatagcatt ttctttaaca atgtttatga aataatagaa ttctgtcct 900
 gtgttaacag ctgtgccaat cccatcattt acttccttgt tggctccatt agacaacaca 960
 ggttgcgatg gcagttctctg aagctacttc ttcagagagc catgcaggac actcctgagg 1020
 aagagagtgg agagaggggt ccttcgcaaa ggtctgggga actggaaaca gtctagtaca 1080
 gtagttgagt gagtccctgg tcaaacatag tttctgtgag agtcaatttt gcctttatct 1140
 atataagcaa ttttcataat ttgtttaatc agtagagaat atagtcattt tatagaaatt 1200
 aggagaaatg agcttgta 1219

<210> 45
 <211> 321
 <212> PRT
 <213> Mus musculus

<400> 45
 Met Gly Thr Thr Thr Leu Ala Trp Asn Ile Asn Asn Thr Ala Glu Asn
 1 5 10 15

Gly	Ser	Tyr	Thr	Glu	Met	Phe	Ser	Cys	Ile	Thr	Lys	Phe	Asn	Thr	Leu
			20					25					30		
Asn	Phe	Leu	Thr	Val	Ile	Ile	Ala	Val	Val	Gly	Leu	Ala	Gly	Asn	Gly
		35					40					45			
Ile	Val	Leu	Trp	Leu	Leu	Ala	Phe	His	Leu	His	Arg	Asn	Ala	Phe	Ser
	50					55					60				
Val	Tyr	Val	Leu	Asn	Leu	Ala	Gly	Ala	Asp	Phe	Leu	Tyr	Leu	Phe	Thr
65					70					75					80
Gln	Val	Val	His	Ser	Leu	Glu	Cys	Val	Leu	Gln	Leu	Asp	Asn	Asn	Ser
			85						90					95	
Phe	Tyr	Ile	Leu	Leu	Ile	Val	Thr	Met	Phe	Ala	Tyr	Leu	Ala	Gly	Leu
			100					105					110		
Cys	Met	Ile	Ala	Ala	Ile	Ser	Ala	Glu	Arg	Cys	Leu	Ser	Val	Met	Trp
		115					120					125			
Pro	Ile	Trp	Tyr	His	Cys	Gln	Arg	Pro	Arg	His	Thr	Ser	Ala	Ile	Met
	130					135					140				
Cys	Ala	Leu	Val	Trp	Val	Ser	Ser	Leu	Leu	Leu	Ser	Leu	Val	Val	Gly
145					150					155					160
Leu	Gly	Cys	Gly	Phe	Leu	Phe	Ser	Tyr	Tyr	Asp	Tyr	Tyr	Phe	Cys	Ile
			165						170					175	
Thr	Leu	Asn	Phe	Ile	Thr	Ala	Ala	Phe	Leu	Ile	Val	Leu	Ser	Val	Val
			180					185					190		
Leu	Ser	Val	Ser	Ser	Leu	Ala	Leu	Val	Lys	Ile	Val	Trp	Gly	Ser	
		195				200					205				
His	Arg	Ile	Pro	Val	Thr	Arg	Phe	Phe	Val	Thr	Ile	Ala	Leu	Thr	Val
	210					215					220				
Val	Val	Phe	Ile	Tyr	Phe	Gly	Met	Pro	Phe	Gly	Ile	Cys	Trp	Phe	Leu
225					230					235					240
Leu	Ser	Arg	Ile	Met	Glu	Phe	Asp	Ser	Ile	Phe	Phe	Asn	Asn	Val	Tyr
			245					250						255	
Glu	Ile	Ile	Glu	Phe	Leu	Ser	Cys	Val	Asn	Ser	Cys	Ala	Asn	Pro	Ile
			260					265					270		
Ile	Tyr	Phe	Leu	Val	Gly	Ser	Ile	Arg	Gln	His	Arg	Leu	Arg	Trp	Gln
		275				280						285			
Ser	Leu	Lys	Leu	Leu	Leu	Gln	Arg	Ala	Met	Gln	Asp	Thr	Pro	Glu	Glu
	290					295					300				
Glu	Ser	Gly	Glu	Arg	Gly	Pro	Ser	Gln	Arg	Ser	Gly	Glu	Leu	Glu	Thr
305					310					315					320
Val															

<210> 46
 <211> 1281
 <212> DNA
 <213> Mus musculus

<400> 46
 atggctcctga cagagagtat catgtgttca tatctctatt tttttgcggg aacaccactg 60
 gaaacttcct aaacatgggt ctaaccactc cagcctggaa cattaacaac acagtagtga 120
 atggaagtaa caatactgaa catttctcct gtgtcagcaa gttcaatacc ctgaactttc 180
 ttactgtcat cattgccatg tttggcctgg caggaaatgc catagtccta tggcttctag 240
 ccttccacct gcctaggaat gccttctctg tctatgtctg caacttggct tgtgctgatt 300
 tcttgcaact ttgcactcag attttaggtt ccctggaatg tttccttcag ttaaatagga 360
 gacacacttt ttttctcacc gttgtattta tgtttgctta ccttgcaggt ttgtgtatga 420
 ttgcagccat cagtgttgag cgctctctat ctgttatgtg gcccatctgg tatcactgcc 480
 aaagaccaag acatacatca tccatcatgt gtgctctgct ctgggcttct tgtctactgt 540

```

tgaatttcct attaggggaa ggctgtggcc ttctgttcag tgatcctaaa tattatttct 600
gtattacttg tgccttaatc actactgcac ttataatatt attaactgtg gttccttctg 660
tgtccagcct ggccctgttg gtcaagatga tctgtggatc acacaggatt cctgtgacca 720
ggttctatgt gaccattgct ctcacattgg tggctcttcattttccttgggt ctgccctttg 780
ggatttactc atctttcttg ataatgttta aggagtttca aagcattttc tcttaccatg 840
tccttgaagt gacaatattc ctgtcctgtg ttaacagctg tgccaatccc atcattttact 900
ttcttgttgg ctccattagg cagcacaggt tgcaatggca gtctctgaag ctacttcttc 960
agagagccat gcaggacact cctgaggaag atagtggaga gaggggtccc tcacaaaggt 1020
ctggggaact ggaaagtgtt tagtgcagta gttgagtgag tctttgatca gacatgggta 1080
ctctgagagt cagttttgcc tttgtttatg taagcaattt tcacaatctt gtacaatttg 1140
taaagaaata gtcattttat agaaattggg agaaaggggc ttgttacaca gaaactgagt 1200
gcaacaccat aaagctgtct tatgtgggtc tcattacatt ctcttgtgat ataagccttg 1260
taatcacttg ggaacaaaac t 1281

```

<210> 47

<211> 322

<212> PRT

<213> Mus musculus

<400> 47

```

Met Gly Leu Thr Thr Pro Ala Trp Asn Ile Asn Asn Thr Val Val Asn
1      5      10      15
Gly Ser Asn Asn Thr Glu His Phe Ser Cys Val Ser Lys Phe Asn Thr
20     25     30
Leu Asn Phe Leu Thr Val Ile Ile Ala Met Phe Gly Leu Ala Gly Asn
35     40     45
Ala Ile Val Leu Trp Leu Leu Ala Phe His Leu Pro Arg Asn Ala Phe
50     55     60
Ser Val Tyr Val Cys Asn Leu Ala Cys Ala Asp Phe Leu Gln Leu Cys
65     70     75     80
Thr Gln Ile Leu Gly Ser Leu Glu Cys Phe Leu Gln Leu Asn Arg Arg
85     90     95
His Thr Phe Phe Leu Thr Val Val Phe Met Phe Ala Tyr Leu Ala Gly
100    105    110
Leu Cys Met Ile Ala Ala Ile Ser Val Glu Arg Ser Leu Ser Val Met
115    120    125
Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ser Ile
130    135    140
Met Cys Ala Leu Leu Trp Ala Phe Cys Leu Leu Asn Phe Leu Leu
145    150    155    160
Gly Glu Gly Cys Gly Leu Leu Phe Ser Asp Pro Lys Tyr Tyr Phe Cys
165    170    175
Ile Thr Cys Ala Leu Ile Thr Thr Ala Leu Ile Ile Leu Leu Thr Val
180    185    190
Val Pro Ser Val Ser Ser Leu Ala Leu Leu Val Lys Met Ile Cys Gly
195    200    205
Ser His Arg Ile Pro Val Thr Arg Phe Tyr Val Thr Ile Ala Leu Thr
210    215    220
Leu Val Val Phe Ile Phe Leu Gly Leu Pro Phe Gly Ile Tyr Ser Ser
225    230    235    240
Phe Leu Ile Met Phe Lys Glu Phe Gln Ser Ile Phe Ser Tyr His Val
245    250    255
Leu Glu Val Thr Ile Phe Leu Ser Cys Val Asn Ser Cys Ala Asn Pro
260    265    270
Ile Ile Tyr Phe Leu Val Gly Ser Ile Arg Gln His Arg Leu Gln Trp
275    280    285
Gln Ser Leu Lys Leu Leu Leu Gln Arg Ala Met Gln Asp Thr Pro Glu

```

290		295		300
Glu Asp Ser Gly Glu Arg Val Pro Ser Gln Arg Ser Gly Glu Leu Glu				
305		310		315
Ser Val				320

<210> 48
 <211> 1280
 <212> DNA
 <213> Mus musculus

<400> 48

```

ccccactagt tcataacaca gaatttaaca tgggtttcttc ttccacccat aggaatgaac 60
tccactcttg acagcagccc agctccaggt ctgaccatca gtcccacccat ggaccttgtg 120
acctggatct acttttcagt gacattcctc gccatggcca cgtgtgtggg gggggatggc 180
aggcaactca ttggtgattt ggctcctgag ctgcaatggc atgcagaggt ctcccttctg 240
tgtctatgtg ctcaacctgg cgggtggctga cttcctcttc ttattctgca tggcctccat 300
gtcagacctg gaaacagggc ccctgctcat agtcaacatt tctgcaaaaa tctatgaagg 360
gatgaggaga atcaagtact ttgcctatac agcaggcctg agcctgctga cagccatcag 420
caccagcgc tgccctctccg tgcttttccc catctggtat aagtgccacc ggccccggca 480
cctgtcatca gtggtatctg gtgcaactctg ggcactggcc ttcttgatga acttctctggc 540
ttctttcttc tgcgtccaat tctggcatcc caacaaacac cagtgttca aggtggacat 600
tgttttcaac agtcttatcc tggggatctt catgcgggtc atgacctga ccagcaccat 660
cctcttcata cgggtgcgga agaacagcct gatgcagaga cggcgccccc ggcggtgta 720
cgtggtcata ctgacttcca tccttgtctt cctcacctgt tctctgccct tgggcatcaa 780
ctggttctta ctctactggg tggatgtgaa acgggatgtg aggctacttt atagctgctg 840
atcacgcttc tcttcgtctt tgagcagcag tgccaaccog gtcatttact tcctcgtggg 900
cagccagaag agccaccggc tgcaggagtc cctgggtgct gtgctggggc gggcactgcg 960
ggatgagcct gagccagagg gcagagagac gccatccacg tgtactaatg atggggtctg 1020
aaggggagccc aaccaggaac tcctccaaag ccccaccag cccttcctta aaagtaccca 1080
gcaagcctgc aatgcaaagg ccttgcaact caaaatgttt gggtcacgtt cctctctgcc 1140
agggaggggt caccactatc acctgtgtgt cctaatactaa actaagaggt gaggcaatat 1200
atctttctgt tttaacctgt tagacacaga tcctaacttt gggteccatc atgggcaagg 1260
ctgtctggga aatggagttt
1280
  
```

<210> 49
 <211> 281
 <212> PRT
 <213> Mus musculus

<400> 49

Met	Ala	Gly	Asn	Ser	Leu	Val	Ile	Trp	Leu	Leu	Ser	Cys	Asn	Gly	Met
1				5					10					15	
Gln	Arg	Ser	Pro	Phe	Cys	Val	Tyr	Val	Leu	Asn	Leu	Ala	Val	Ala	Asp
			20					25					30		
Phe	Leu	Phe	Leu	Phe	Cys	Met	Ala	Ser	Met	Leu	Ser	Leu	Glu	Thr	Gly
		35					40					45			
Pro	Leu	Leu	Ile	Val	Asn	Ile	Ser	Ala	Lys	Ile	Tyr	Glu	Gly	Met	Arg
		50				55					60				
Arg	Ile	Lys	Tyr	Phe	Ala	Tyr	Thr	Ala	Gly	Leu	Ser	Leu	Leu	Thr	Ala
65					70				75					80	
Ile	Ser	Thr	Gln	Arg	Cys	Leu	Ser	Val	Leu	Phe	Pro	Ile	Trp	Tyr	Lys
			85					90					95		
Cys	His	Arg	Pro	Arg	His	Leu	Ser	Ser	Val	Val	Ser	Gly	Ala	Leu	Trp
			100					105				110			
Ala	Leu	Ala	Phe	Leu	Met	Asn	Phe	Leu	Ala	Ser	Phe	Phe	Cys	Val	Gln

1				5					10					15		
Met	Ala	Phe	Asn	Leu	Thr	Ile	Leu	Ser	Leu	Thr	Glu	Leu	Leu	Ser	Leu	
			20					25					30			
Gly	Gly	Leu	Leu	Gly	Asn	Gly	Val	Ala	Leu	Trp	Leu	Leu	Asn	Gln	Asn	
		35					40					45				
Val	Tyr	Arg	Asn	Pro	Phe	Ser	Ile	Tyr	Leu	Leu	Asp	Val	Ala	Cys	Ala	
	50					55					60					
Asp	Leu	Ile	Phe	Leu	Cys	Cys	His	Met	Val	Ala	Ile	Ile	Pro	Glu	Leu	
65					70					75					80	
Leu	Gln	Asp	Gln	Leu	Asn	Phe	Pro	Glu	Phe	Val	His	Ile	Ser	Leu	Thr	
				85					90					95		
Met	Leu	Arg	Phe	Phe	Cys	Tyr	Ile	Val	Gly	Leu	Ser	Leu	Leu	Ala	Ala	
			100					105					110			
Ile	Ser	Thr	Glu	Gln	Cys	Leu	Ala	Thr	Leu	Phe	Pro	Ala	Trp	Tyr	Leu	
		115					120					125				
Cys	Arg	Arg	Pro	Arg	Tyr	Leu	Thr	Thr	Cys	Val	Cys	Ala	Leu	Ile	Trp	
	130					135					140					
Val	Leu	Cys	Leu	Leu	Leu	Asp	Leu	Leu	Leu	Ser	Gly	Ala	Cys	Thr	Gln	
145					150					155					160	
Phe	Phe	Gly	Ala	Pro	Ser	Tyr	His	Leu	Cys	Asp	Met	Leu	Trp	Leu	Val	
			165						170				175			
Val	Ala	Val	Leu	Ala	Ala	Leu	Cys	Cys	Thr	Met	Cys	Val	Thr	Ser		
		180					185					190				
Leu	Leu	Leu	Leu	Arg	Val	Glu	Arg	Gly	Pro	Glu	Arg	His	Gln	Pro		
	195					200					205					
Arg	Gly	Phe	Pro	Thr	Leu	Val	Leu	Leu	Ala	Val	Leu	Leu	Phe	Leu	Phe	
	210				215						220					
Cys	Gly	Leu	Pro	Phe	Gly	Ile	Phe	Trp	Leu	Ser	Lys	Asn	Leu	Ser	Trp	
225					230					235					240	
His	Ile	Pro	Leu	Tyr	Phe	Tyr	His	Phe	Ser	Phe	Phe	Met	Ala	Ser	Val	
			245						250				255			
His	Ser	Ala	Ala	Lys	Pro	Ala	Ile	Tyr	Phe	Phe	Leu	Gly	Ser	Thr	Pro	
		260					265					270				
Gly	Gln	Arg	Phe	Arg	Glu	Pro	Leu	Arg	Leu	Val	Leu	Gln	Arg	Ala	Leu	
	275					280					285					
Gly	Asp	Glu	Ala	Glu	Leu	Gly	Ala	Gly	Arg	Glu	Ala	Ser	Gln	Gly	Gly	
	290					295					300					
Leu	Val	Asp	Met	Thr	Val											
305					310											

<210> 52

<211> 1519

<212> DNA

<213> Mus musculus

<400> 52

```

tgtgttccca gcagcaccca gtgcagggtt tctggcccta aacatytyma gcctccacaa 60
tggcactcac aacaacaaaa tccaatggac gaaacccatc ccctggaagt accagcatca 120
agattctgat cccaacttg atgatcatca tctttggact ggtcgggctg acaggaaacg 180
ccattgtgtt ctggctcctg ggcttcact tgcgcaggaa tgccttctca gtctacatcc 240
taaacttggc cctggctgac ttctctctcc tcctctgtcg catcatagct tccacgcaga 300
aacttctcac gttctcctca cccaacatta cctttctcat ttgcctttac accttcaggg 360
tgattctcta catcgcaggc ctgagcatgc tcaactgccat cagcattgag cgctgcctgt 420
ctgtcctgtg ccccatctgg tctcgtctgcc accgccaga acacacatca actgtcatgt 480
gtgctgcaat ctgggtcctg tcctgtttga tctgcattct gaataggtat ttctgcgggt 540
tcttagatac caaatatgta aatgactatg ggtgtatggc atcaaatttc tttaatgctg 600

```

```

catacctgat gtttttgttt gtagtcctct gtgtgtccag cctggctctg ctggccaggt 660
tgttctgtgg cactgggcg atgaagctta ccagattgta cgtgaccatc atgctgacca 720
ttttggtttt tctcctctgc gggttgccct gtggcttata ctggttcctg ttattctgga 780
ttaagaatgg ttttgctgta tttgatttta acttttatct agcatcaact gtcctgagtg 840
ctattaatag ctctgccaac cccatcattt acttcttcgt gggctcattc aggcacgggt 900
tgaagcacca gaccctcaaa atggttctcc agagtgcact gcaggatact cctgagacag 960
ctgaaaacat ggtggagatg tcaagaagca aagcagagcc gtgatgaaga gcctctgcct 1020
ggacctcgga ggtagctttg gagtgagcac ttccctgctg caattgacca ctgtccactc 1080
tcctctcagc ttactgactc aacatgcctc agtgggtccac caacatcttc aacagctctc 1140
cattgattta gtttttctaa ctctcccaag taatagcatt aatcagaaag tatcatgtct 1200
gcacacctct tgacattaat caaattctca aactaacttc ctctgaagct ttcttgctga 1260
ttctttggaa cttttgttgc catggaacta gcccagggtc agaaccatga ctctcgatc 1320
tgtgatggtt ctgtacctga atataaagac aaaggagcct agagatgac ctgtccattc 1380
ccaaatacca cctagagagc tggctctcca ggattgcaga caagcctgtg agcacaggta 1440
agaccaccac ttctgtctaa agggacatgc ctggaactac tcaggacaca ggtacagagg 1500
agcattttgg gacaagata                                     1519

```

```

<210> 53
<211> 303
<212> PRT
<213> Mus musculus

```

```

<400> 53
Asn Pro Ser Pro Gly Ser Thr Ser Ile Lys Ile Leu Ile Pro Asn Leu
1          5          10          15
Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala Ile Val
20          25          30
Phe Trp Leu Leu Gly Phe His Leu Arg Arg Asn Ala Phe Ser Val Tyr
35          40          45
Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys Arg Ile
50          55          60
Ile Ala Ser Thr Gln Lys Leu Leu Thr Phe Ser Ser Pro Asn Ile Thr
65          70          75          80
Phe Leu Ile Cys Leu Tyr Thr Phe Arg Val Ile Leu Tyr Ile Ala Gly
85          90          95
Leu Ser Met Leu Thr Ala Ile Ser Ile Glu Arg Cys Leu Ser Val Leu
100         105         110
Cys Pro Ile Trp Tyr Arg Cys His Arg Pro Glu His Thr Ser Thr Val
115         120         125
Met Cys Ala Ala Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Asn
130         135         140
Arg Tyr Phe Cys Gly Phe Leu Asp Thr Lys Tyr Val Asn Asp Tyr Gly
145         150         155         160
Cys Met Ala Ser Asn Phe Phe Asn Ala Ala Tyr Leu Met Phe Leu Phe
165         170         175
Val Val Leu Cys Val Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe Cys
180         185         190
Gly Thr Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile Met Leu
195         200         205
Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Cys Gly Leu Tyr Trp
210         215         220
Phe Leu Leu Phe Trp Ile Lys Asn Gly Phe Ala Val Phe Asp Phe Asn
225         230         235         240
Phe Tyr Leu Ala Ser Thr Val Leu Ser Ala Ile Asn Ser Ser Ala Asn
245         250         255
Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu Lys His
260         265         270

```

Gln	Thr	Leu	Lys	Met	Val	Leu	Gln	Ser	Ala	Leu	Gln	Asp	Thr	Pro	Glu
		275					280					285			
Thr	Ala	Glu	Asn	Met	Val	Glu	Met	Ser	Arg	Ser	Lys	Ala	Glu	Pro	
		290					295					300			

<210> 54
 <211> 2093
 <212> DNA
 <213> Mus musculus

<400> 54

tggtatgcac	tactgataa	gcggatatag	cccaaaagct	gcaaacaacc	aggataaaat	60
tcacagacca	catgaagctc	aataagaagg	aagaacaaag	tgtagggtgtt	tcagtccttc	120
ttagaaggag	aacaaaatac	tcacaggagc	aaatatggag	atacagtata	gagcagagac	180
taaaggaaag	gtcattcaga	gactgtccca	actggggatt	cattccatat	agagatacca	240
aaccagact	ctaaattgga	tgcaaacaag	tgcatgccaa	aaggagctag	ataaggtaac	300
cctgtctcaa	aaaaaaaaaa	aaggctgtca	cctgaaaggc	cctgtcaaag	gcttacaaat	360
acagaagcag	atgttagtag	tcaacaattg	gacagagcat	ggggttccta	atagaggagt	420
tagaggaagg	aattagggag	ttgaagggat	ttgcagcccc	ataagaacaa	caatatcaac	480
caaccggaca	ctccccaga	tatcacaggg	tctaagccat	caacaaagga	gtacacatgg	540
ctccagatgc	acatatagca	gaggacggcc	atgtcatgca	tcaatggaag	aagagatcct	600
tgtacctatg	aaggatcgat	agatgaccca	gtgtagggga	atcaaggaca	gaaaggttgg	660
agtggatgtg	tggactggcc	ggactgacag	gaaatgccat	tgtgttctgg	ctcctgctct	720
tccacttgca	caggaatgct	ttctcaatct	acatcttaaa	tttggtcata	gctgacttcc	780
ttttcctcct	tggtcacatc	atagcttcca	caatgcaact	tctcaagggt	tcctacctca	840
acattatttt	tctttaccgt	ttttacacaa	tcattgatgt	gctctacaac	acaggcctga	900
ccatgctcag	tgccatcaac	actaagcact	gcctgtctgt	cctgtgtccc	atctggtatc	960
gctcccactg	cacaaaacac	acatcaactg	tcatatgtgc	tgctatacgg	gacctgtccc	1020
tggtgatctg	ctttctgaat	acgtattttc	gtgggtctct	agataccaaa	tataaaaatg	1080
acaatgggtg	tctggcatcg	aattttcttta	ttaatgcata	ccctgatgtt	tttgtttgta	1140
gtcctactgt	ctgtccactc	tggtctctgt	ggccagggtg	ttctgtgggt	ctgggaagat	1200
gaaattttaca	agattattcg	tgaccatcat	gctgacagtt	ttagtttttc	tcctctgtgg	1260
gttgccctct	gccatctact	ggttcctggt	aatctggatt	aagattgatt	atggtgtatt	1320
tgcttatgat	gtttttctgg	catcactcgt	cctgagtgtc	gttaacagct	gtgccaaccc	1380
catcattttac	ttcttcgtgg	gctctttcag	gcacgcgttg	aagcaccaaa	ccctcaaaat	1440
ggttctccag	aatgtactgc	aggacactcc	tgagacagct	gaaaacatgg	tagagatgtc	1500
aagaggcaaa	gcagagccat	gatgaagagc	ctctgcctgg	agctcagagg	tggttttgga	1560
gtgagcactg	ccctgatgta	cttgaccact	gtccactctc	ctctcagctt	actgactaga	1620
catgcctcag	tggtccacca	tctccaagag	ctctccactg	actttgtttt	ctacctctcc	1680
tgaataatag	cattaatcag	aaagtatcat	gtctacatcc	ttcttgacat	taatcaaatt	1740
ctcatgctat	cttcccctga	agctttcttg	ctgtttcttt	gggacttttt	gttgccatgg	1800
aaataacaaa	ggtccagaac	catgactctc	ttgcctgtga	ttgttctgta	cctgaatgta	1860
aagataaagg	agccaggaga	tgatcctgta	tcacggtgct	ccataccaaa	ataccaccaa	1920
gagagctggg	ctcccaggag	tgacagacaag	cctgtgagca	caggtaagac	caccatttct	1980
gctcaaaggg	acatgcctgg	aaccctcagt	acacaggaac	agaggagcct	ggaactggat	2040
atttcagttt	tccatctgca	ccccagagct	gactctgtac	cacagctctc	cat	2093

<210> 55
 <211> 282
 <212> PRT
 <213> Mus musculus

<400> 55

Gly	Leu	Ala	Gly	Leu	Thr	Gly	Asn	Ala	Ile	Val	Phe	Trp	Leu	Leu	Leu
1				5					10					15	
Phe	His	Leu	His	Arg	Asn	Ala	Phe	Ser	Ile	Tyr	Ile	Leu	Asn	Leu	Val


```

tctgaaatcc aggcagagggc tcttcatcat ggctctgctt tgctttttga catctccact 1020
atgttttcag gtgtctcagg aatgtcctgc agtgcaactct ggataacccat tttgaggggc 1080
tgggtgctgca atcgatgcct gaaggagccc acgaagaagt aaatgatggg gttggcacag 1140
ctgttaagag cagtcaggac acttgatgcc ataaaaagac taaaatcaaa tacaataaaa 1200
acattcttaa tcttggataa caggaaccag tagatgccac agggcaaccc gcagaggaga 1260
aaaacaaaaa tggtcagcat gatggtcacg tacaatctgg taagtttcat acgcccagcg 1320
ccacagaaca acctggccag cagagccagg ctggatagac agaggaccac aaacaaaaac 1380
atcaggatatg cagcagtaaa gaagtttgat gccatacatc catagtcatt tacatatattg 1440
gtatctaaga aaacgcagaa atacttattc agaatgctga tcaacagggg caggaccag 1500
atcatagcac acgtgacagt tgatgtgtgt tctgggcggt ggcagcgata ccagatgggg 1560
cacagtacag acagacaccg ttcagtgcg atggcaactga gtatgctcag gcctgcaatg 1620
tagagaacca gcatgatgct gaagaagcac ctgcgaaaga taatgttagg gtaggaaacc 1680
ttgagaagaa acagagtggg agctatgatg tgacagagga ggaagaggaa gtcagccaga 1740
gccaaagtta ggatgtagac tgagaaggca ttcttgcgca agcggaagcc caggagccag 1800
aacacaatgg catttcctgt catcccaacc agtccgaaga tgatgatcat caagtgtggg 1860
atcagggtgc tgatgtcaat acttccaggg atggtttctg ccattagatt tgttgcgcac 1920
ggtgccattg atgaggcaga ggtgtttagg gccagaaacc ctgcaccggg gctgctggga 1980
acacaaagaa gaaatgaggc tttccctatg aacacacctt ttgtttttct tttccctttt 2040
ttgtttttgt tgttgttttt aaaaattttt ttctatttga tattttcttt atttaaattt 2100
caaatgttat cccctttcct gcttttccct ctccaggaaa tccccatctc atcctccctc 2160
cttctgcttc tatgatggtg ttctcaacc cacacacca ctccacctc tctgccctcg 2220
attcccatc actggagcat ctattgagcc ttcaaaggc ctaggacctt tttttccatt 2280
gatgcatgac acagcaattc tctcatcat atacagctgg agccatgttt acttwctttg 2340
ttgatggctt attccatgga ggctggggcc agggggkgctg tctgatttgt tgatattggt 2400
t

```

<210> 57

<211> 305

<212> PRT

<213> Mus musculus

<400> 57

```

Met Asp Glu Thr Ile Pro Gly Ser Ile Asp Ile Ser Thr Leu Ile Pro
 1           5           10           15
His Leu Met   Ile Ile Ile Phe Gly Leu Val Gly Met Thr Gly Asn Ala
 20           25           30
Ile Val Phe Trp Leu Leu Gly Phe Arg Leu Arg Lys Asn Ala Phe Ser
 35           40           45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50           55           60
His Ile Ile Ala Ser Thr Leu Phe Leu Leu Lys Val Ser Tyr Pro Asn
 65           70           75           80
Ile Ile Phe Arg Arg Cys Phe Phe Ser Ile Met Leu Val Leu Tyr Ile
 85           90           95
Ala Gly Leu Ser Ile Leu Ser Ala Ile Gly Thr Glu Arg Cys Leu Ser
100           105           110
Val Leu Cys Pro Ile Trp Tyr Arg Cys His Arg Pro Glu His Thr Ser
115           120           125
Thr Val Thr Cys Ala Met Ile Trp Val Leu Ser Leu Leu Ile Ser Ile
130           135           140
Leu Asn Lys Tyr Phe Cys Val Phe Leu Asp Thr Lys Tyr Val Asn Asp
145           150           155           160
Tyr Gly Cys Met Ala Ser Asn Phe Phe Thr Ala Ala Tyr Leu Met Phe
165           170           175
Leu Phe Val Val Leu Cys Leu Ser Ser Leu Ala Leu Leu Ala Arg Leu
180           185           190
Phe Cys Gly Ala Gly Arg Met Lys Leu Thr Arg Leu Tyr Val Thr Ile

```

	195		200		205
Met	Leu Thr	Ile Leu Val	Phe Leu Leu Cys Gly	Leu Pro Cys Gly	Ile
	210		215		220
Tyr	Trp Phe	Leu Leu Ser	Lys Ile Lys Asn Val	Phe Ile Val Phe	Asp
225		230		235	240
Phe	Ser Leu Phe	Met Ala Ser	Ser Val Leu Thr	Ala Leu Asn Ser	Cys
	245		250		255
Ala	Asn Pro	Ile Ile Tyr Phe	Phe Val Gly Ser	Phe Arg His Arg	Leu
	260		265		270
Gln	His Gln	Thr Leu Lys Met	Val Ile Gln Ser	Ala Leu Gln Asp	Ile
	275		280		285
Pro	Glu Thr	Pro Glu Asn	Ile Val Glu Met Ser	Lys Ser Lys Ala	Glu
	290		295		300
Pro					
305					

<210> 58
 <211> 2110
 <212> DNA
 <213> Mus musculus

<400> 58

agaggtgtaa	gtgggtatgt	gggttgagga	acacccttca	tagaagcagg	gggagggagg	60
atgagatggg	gttttctggg	aaggggcaaa	agcaggaaa	tgataacat	ttgtaattta	120
aataaagaaa	atatccaata	caaaaaattt	aaaaaaaaaa	acacaaaacc	acacaaaaaa	180
aagacaaaaa	aaaagaaatt	aaaagtgtgt	tccatagtta	atgcctcatt	tttctttgtg	240
ttcccagcaa	aaccagtgc	gggtttctgg	ccctaaacac	cttcagcctt	ttcaatggca	300
cccaacgaca	accaatacaa	tggacgaaac	catccctgga	cgtattgaca	tcgagaccct	360
gatcccaaac	ttgatgatca	tcatcttcgg	actggctcgg	ctgacaggaa	atggcattgt	420
gttctggctc	ctgggcttcc	gcatgcacag	gaatgccttc	ttagtctaca	tcctaaactt	480
ggccctggct	gactttctct	tccttctctg	tcacatcatt	aattccacaa	tgcttcttct	540
caaggttctc	ccactcaact	ggatscttgt	tccattgctt	taacaccatc	agaacgggtc	600
tatacatcac	aggcctgagc	atgctcagcg	ccatcagcac	tgagcgtgc	ctgtctgtcc	660
tgtgccccat	ctggtatcga	tgccgtcgcc	gagaaaacac	atcagctgtc	atgtgtgtctg	720
tgatctgggt	cctgtccctg	ttgatctgta	ttctgaatag	ttatttctgt	tattactctg	780
gtcccaaaga	tgtaaataac	tctgtgtgtc	tggtatcgaa	attcttcatc	agtacatacc	840
caatgttttt	gtttgtagtc	ctctgtctgt	ccaccctgac	tctgctggcc	aggttgttct	900
gtggtgctgg	gaagaggaaa	tttaccagat	tattcgtgac	catcatactg	accatttttg	960
tttttcttct	gtgtgggttg	cccctgggct	tctactgggt	cctgttacac	tgtattaagg	1020
gtagtttcag	tgtactacat	aatagacttt	ttcaggcatc	acttgtccta	acttctgtta	1080
acagctgtgc	caaccccatc	atttacttct	tcgtgggctc	cttcagggat	cgggtgaagc	1140
accagaccct	caaaatggta	ctccagaatg	cactgcagga	cactcctgag	acacctgaaa	1200
acaaggtgga	gatgtcaaga	agtaaagcag	agccatgatg	aagagactcg	gccaggacct	1260
cagaggtagc	tttgagtsa	gwactgccct	gctracattg	accactgtcc	actctcctct	1320
cagcttacts	acttyggatg	cctcagtgg	ccaacaacac	cttcaaawgc	tctccactga	1380
cttagtattt	atacctctcc	caagtaatat	cattaatcag	aaagtatcat	gtctgcatcc	1440
ttcttgacat	taatccaatt	ctcatactaa	cttcatctga	aactttcttg	atgttccttt	1500
ggaacttttg	ttgccatgg	aatagccyag	gtccagcacc	atgactctct	tgtctgtgat	1560
tkttctgtac	ctgaatgtaa	agtcaaagga	gccaggagat	gacctgtgtg	cacagtgtct	1620
attacccaaa	caccaccaac	agagcttgct	tcccaggagt	gcagacacgc	ctgtgaacac	1680
aggtaagacc	accacttctg	cttaaaggga	catgcctgga	accctcagaa	cacaggaaga	1740
aaagagcagc	cttgagcagg	atacttccag	tttccaactg	caccccgag	ctgaccctgt	1800
gccacagctc	tccataccca	aattcctccc	agaaagaacy	ggctwaccaa	gagtactgac	1860
acayaggctt	gcaggaggga	caagccacmg	tcagagatag	caaggaccag	ctaaccaccag	1920
agataaccag	atggcaagag	gcaagggcaa	aaatataagc	aatgggaacc	aagactattt	1980
ggcatcatca	gaacctagtt	ctctcaacat	ggtgagccat	ggctactcca	acagacaaga	2040

aaagcatgac tctgatttaa tgtcacagat gatgatgatg atgatgatga tgatgatgat 2100
 gatgatgatg 2110

<210> 59
 <211> 305
 <212> PRT
 <213> Mus musculus

<400> 59
 Met Asp Glu Thr Ile Pro Gly Arg Ile Asp Ile Glu Thr Leu Ile Pro
 1 5 10 15
 Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly
 20 25 30
 Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Asn Ala Phe Leu
 35 40 45
 Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50 55 60
 His Ile Ile Asn Ser Thr Met Leu Leu Leu Lys Val Leu Pro Pro Thr
 65 70 75 80
 Gly Ser Leu Phe His Cys Phe Asn Thr Ile Arg Thr Val Leu Tyr Ile
 85 90 95
 Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser
 100 105 110
 Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Arg Glu Asn Thr Ser
 115 120 125
 Ala Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
 130 135 140
 Leu Asn Ser Tyr Phe Cys Tyr Tyr Ser Gly Pro Lys Asp Val Asn Asn
 145 150 155 160
 Ser Val Cys Leu Val Ser Lys Phe Phe Ile Ser Thr Tyr Pro Met Phe
 165 170 175
 Leu Phe Val Val Leu Cys Leu Ser Thr Leu Thr Leu Leu Ala Arg Leu
 180 185 190
 Phe Cys Gly Ala Gly Lys Arg Lys Phe Thr Arg Leu Phe Val Thr Ile
 195 200 205
 Ile Leu Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe
 210 215 220
 Tyr Trp Phe Leu Leu His Cys Ile Lys Gly Ser Phe Ser Val Leu His
 225 230 235 240
 Asn Arg Leu Phe Gln Ala Ser Leu Val Leu Thr Ser Val Asn Ser Cys
 245 250 255
 Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Asp Arg Val
 260 265 270
 Lys His Gln Thr Leu Lys Met Val Leu Gln Asn Ala Leu Gln Asp Thr
 275 280 285
 Pro Glu Thr Pro Glu Asn Lys Val Glu Met Ser Arg Ser Lys Ala Glu
 290 295 300
 Pro
 305

<210> 60
 <211> 740
 <212> DNA
 <213> Mus musculus

<400> 60

```

caggggtttct ggccctaaac acctcagcct cggcaatgac acccagaca aacaattcaa 60
tggacgaaac catccctgga agtattggca ctgagaccct gattcaaaac ttgatgatca 120
tcatcttcgg actggtcggg ctgacaggaa atgccattgt gttctggctc ctgggcttcc 180
acttgcacag gaatgccttt ttagtctaca tcctaaactt ggccctggct gatttccctc 240
tccttctctg tcacatcata gattccacag tgtttcttct caagggtccc ccaccaacc 300
ggatcttggt ccattgcttt aacatcatca gaattgtact ctacatcaca ggcttgagca 360
tgctcagtgc catcagcatg gagcgctgcc tgtctgtcct gtgccccatc tggtatcgct 420
gccgccgcc agaaaacaca tcaactgtca tttgtgctgt gatctggatc ctgtccctgt 480
tgttctgcat tctgaatgga tatttctggt atttctctgg tcccaactat gtaaatgact 540
atgtgtgttt tgcacggac atctttatca gaacataccc aatgtttttg tttgtagtcc 600
tctgtctgtc cactctggct ctgctggcca ggttgttctg tgggtgctggg aagacgaaat 660
ttaccagatt attcgtcacc atcatactga ccgttttggt ttttcttctc tgtgggttgc 720
ccctgggctt cttctggttc                                     740

```

<210> 61
 <211> 227
 <212> PRT
 <213> Mus musculus

```

<400> 61
Met Asp Glu Thr Ile Pro Gly Ser Ile Gly Thr Glu Thr Leu Ile Gln
1      5      10      15
Asn Leu Met Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
20     25     30
Ile Val Phe Trp Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu
35     40     45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
50     55     60
His Ile Ile Asp Ser Thr Val Phe Leu Leu Lys Val Pro Pro Pro Asn
65     70     75     80
Arg Ile Leu Val His Cys Phe Asn Ile Ile Arg Ile Val Leu Tyr Ile
85     90     95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Met Glu Arg Cys Leu Ser
100    105    110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu Asn Thr Ser
115    120    125
Thr Val Ile Cys Ala Val Ile Trp Ile Leu Ser Leu Leu Phe Cys Ile
130    135    140
Leu Asn Gly Tyr Phe Cys Tyr Phe Ser Gly Pro Asn Tyr Val Asn Asp
145    150    155    160
Tyr Val Cys Phe Ala Ser Asp Ile Phe Ile Arg Thr Tyr Pro Met Phe
165    170    175
Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu
180    185    190
Phe Cys Gly Ala Gly Lys Thr Lys Phe Thr Arg Leu Phe Val Thr Ile
195    200    205
Ile Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe
210    215    220
Phe Trp Phe
225

```

<210> 62
 <211> 1979
 <212> DNA
 <213> Mus musculus

<400> 62

```
aatacacaaa attaaaaaca acaacaacaa caacacgccc cacaaaaaaa gaaaacaaaa 60
acaaaaaaga aattaaaagt tgtggtcata gtaaaggcct cacttcttct ttgtgttccc 120
agcaacacca gtgcagggtt tctggcccg aacacctcag cctcgacaat gacaccaca 180
acaacaaatc caatgaacga aacctacctt ggaagtattg acatcgagac cctgatacca 240
aacttgatga tcatcatctt cggactggtc gggctgacag gaaatgccat tgtgttcttg 300
ctcctgggct tccgcatgca caggactgcc ttctcagtct acatcctaaa cttggccctg 360
gctgacttcc tcttcttct ctgtcacatc ataaattcca cagtgttct tctccaggtt 420
tccccaccca acagtacctt ggtccattgc tttgacacca tcagaatggt tctctacatc 480
gcaggcctga gcatgctcag tgccattagc actgagcact gcctgtctgt cctgtgcccc 540
atctgggtatc gctgcgcgcg cccagaacat acttcaactg tcatgtgtgc tgtgatctgg 600
gtcctgtccc tgttgatctg cattctaagt ggatatttct gtaatttttt tcttcacaaa 660
tatgtatatt actctgtgtg tcgggcattg gaattctgta tcggaacata ccccgatgtt 720
tttgttttgt agtctctgt ctgtccaccc tggctctgct ggtcagggtt ttctgtggta 780
ctgggaaggc aaaatttacc agattattcg tgacctcat gctgactgtt ttggtttttc 840
ttctctgtgg gttgcccctg tgtttcttct ggttcttggt agtctggatt aagcgtcttc 900
tcagtgtact aaatattaca ttttattttg catccattgt cctaactgtt gttaacagct 960
gtgccaaacc catcatttac ttcttcgtgg gctccttcag gcacggttg aagcaacaga 1020
acctcaaaat ggttctccag aatgcaactgc aggacactgc tgagacacct gaaaacgtgg 1080
cagagatttc aagaagcaaa gcagagccct gatgaggagc ctctgcctgg acctcagagg 1140
tggctttggc actgagcact gccctgctgc acttgcccac tgtccactct cctctcagct 1200
tactgactgg caataactca gtggtacaac aacaccttca aaagctcacc actgacttag 1260
tatttttacc tatcccaagt aatagcatta atcagaaagt atcatgtctg catccttcta 1320
gacattattc aaattctcat ccaacttcat ctgaaacttt cttgctattt ctttgaaca 1380
ttttttgcca tggtaatagc ccagggtccag catcatgct ctcttacctt tgattgttct 1440
gtacctgaat gtaaagaaaa aggagagaga agatgatcct ctgtcacagt gctcattacc 1500
caagcaccac taagagagct tgtctccag gagtgcagac aaacctgtga gcacaggtaa 1560
gactaccact tctgcttaaa ggggcattgcc tggaaaccac aggacacagg taaagaggag 1620
cagcctgaga aaggatactt tccagtttcc aactgcaccc tggagctgac cctgtgccac 1680
agctctcccc accttaattc ttcccagaaa gaactggtct mccaggaagt actgacacat 1740
agccttgtag gaggtacaag acactgtcac agatagcaag accagctaac accagagata 1800
accagatggc aagaggcaag ggcaaaaaca taagcaatgg gaaccaaggc tacttggcat 1860
catcagaacc tagttctctc aacaaagtga gccctggata ctccaacaca caagaaaagt 1920
atgactgtga ttaaaagtca ccgatgatga tgatgatgat gatgatgatg atgatgatg 1979
```

<210> 63

<211> 305

<212> PRT

<213> Mus musculus

<400> 63

```
Met Asn Glu Thr Ile Pro Gly Ser Ile Asp Ile Glu Thr Leu Ile Pro
 1           5           10           15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
 20           25           30
Ile Val Phe Trp Leu Leu Gly Phe Arg Met His Arg Thr Ala Phe Ser
 35           40           45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Phe Leu Leu Cys
 50           55           60
His Ile Ile Asn Ser Thr Val Leu Leu Leu Gln Val Ser Pro Pro Asn
 65           70           75           80
Ser Thr Leu Val His Cys Phe Asp Thr Ile Arg Met Val Leu Tyr Ile
 85           90           95
Ala Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu His Cys Leu Ser
100          105          110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu His Thr Ser
115          120          125
```

Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
 130 135 140
 Leu Ser Gly Tyr Phe Cys Asn Phe Phe Leu His Lys Tyr Val Tyr Tyr
 145 150 155 160
 Ser Val Cys Arg Ala Leu Glu Phe Cys Ile Gly Thr Tyr Pro Met Phe
 165 170 175
 Leu Phe Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Val Arg Leu
 180 185 190
 Phe Cys Gly Thr Gly Lys Ala Lys Phe Thr Arg Leu Phe Val Thr Ile
 195 200 205
 Met Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Cys Phe
 210 215 220
 Phe Trp Phe Leu Val Val Trp Ile Lys Arg Pro Leu Ser Val Leu Asn
 225 230 235 240
 Ile Thr Phe Tyr Phe Ala Ser Ile Val Leu Thr Val Val Asn Ser Cys
 245 250 255
 Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg His Arg Leu
 260 265 270
 Lys Gln Gln Asn Leu Lys Met Val Leu Gln Asn Ala Leu Gln Asp Thr
 275 280 285
 Ala Glu Thr Pro Glu Asn Val Ala Glu Ile Ser Arg Ser Lys Ala Glu
 290 295 300
 Pro
 305

<210> 64
 <211> 1485
 <212> DNA
 <213> Mus musculus

<400> 64
 aacaacacaa aaccctgaaa aaaaaaaaga aattaaaagt tttgttcata gtaaaggcct 60
 catttcttct ttgtgttcac agcaacatca gtgcacgggt aatggcaata aacacctcag 120
 cctcggaat ggcacccacg acaacaaatc caaagggaag caaacaatcc ctgggaagta 180
 ttgacatcga gaccctgatc tcaaacttga tgatcatcat ttctgggctg gtagggctgc 240
 caggaaatgc cattgtgttc tggctcctgg gcttctgctt gcacaggaat gccttcttag 300
 tctacatcct aaacttggcc ctggctgacg tctcttctt tctctgtcac atcataaatt 360
 ccacagtgtc tcttctcaag gttccccac ccaacggtaa tattgggtcca ttgcttcaac 420
 atcatcagaa ttgttctcta catcacaggc ctgagcatgc tcagtgccat catcactgag 480
 cgctgcctgt ctatcctgtg ccccatctgg tctcgtgccc accgccaga acacacatca 540
 actgccaatg gtgctgtgat ctgggtcctg tctctgttga tctgcattct tggaagaata 600
 tttctgtaat ttttctctc acaaatatgt aaattactct gtgtgtctgg cattggactc 660
 ctttatcgga acatacccaa tgtttttgt tgtagtctc tgtctgtcca ccatggctct 720
 gctggccagg ttgttctgtg gttctgggaa gacgaaattt accagattat ttgtgaccat 780
 catgcttacc gttttgggtt ttcttctctg cttgggttgc ccctgggctt cttctgggtc 840
 ctgttactct ggattaaggg tgcctacagt gtactagggt atagatttta ttttgcacat 900
 attgtcctaa ctgctgttaa cagctgtgcc aaccccatca tttacttctt catgggctca 960
 ttcaggcaac gattgcagca caagaccctc aaaatcggtc tccagagtgc actgcacgac 1020
 actcctgaga cacctgaaaa catggtggag atgtcaagaa gcaaagcaga gccataatga 1080
 agagcctctg cctggacctc agaggtggat ttggagttag aactgcccta cgcttgacca 1140
 ctgtccactc tctctcagc ttactgactt tggatgccta agtgggtcaa caacaacttc 1200
 aaaatctctc cactgactta gtatttatac ctctcccaag taatagcatt aatcagaaaag 1260
 tatcatgtct gcaccttct tgacattaat ccaattctca tactaacttc atctgaaact 1320
 ttcttgcctg ttctttggaa cttttgttgc catagtaata gccagatcc agcaccatga 1380
 ctacttgtc tgtgattatt ctgtacctga atgtaaagaa aaaggcagga gatgatcctg 1440
 tatcacagt ctcattacac aaacaccacc aagaaagctc gtctc 1485

<210> 65
 <211> 300
 <212> PRT
 <213> Mus musculus

<400> 65
 Gly Ser Ile Asp Ile Glu Thr Leu Ile Ser Asn Leu Met Ile Ile Ile
 1 5 10 15
 Phe Gly Leu Val Gly Leu Pro Gly Asn Ala Ile Val Phe Trp Leu Leu
 20 25 30
 Gly Phe Cys Leu His Arg Asn Ala Phe Leu Val Tyr Ile Leu Asn Leu
 35 40 45
 Ala Leu Ala Asp Val Leu Phe Leu Leu Cys His Ile Ile Asn Ser Thr
 50 55 60
 Val Leu Leu Leu Lys Val Pro His Pro Thr Val Ile Leu Val His Cys
 65 70 75 80
 Phe Asn Ile Ile Arg Ile Val Leu Tyr Ile Thr Gly Leu Ser Met Leu
 85 90 95
 Ser Ala Ile Ile Thr Glu Arg Cys Leu Ser Ile Leu Cys Pro Ile Trp
 100 105 110
 Tyr Arg Cys His Arg Pro Glu His Thr Ser Thr Ala Met Cys Ala Val
 115 120 125
 Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Gly Lys Tyr Phe Cys
 130 135 140
 Asn Phe Phe Leu His Lys Tyr Val Asn Tyr Ser Val Cys Leu Ala Leu
 145 150 155 160
 Asp Ser Phe Ile Gly Thr Tyr Pro Met Phe Leu Leu Val Val Leu Cys
 165 170 175
 Leu Ser Thr Met Ala Leu Leu Ala Arg Leu Phe Cys Gly Ser Gly Lys
 180 185 190
 Thr Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu Thr Val Leu Val
 195 200 205
 Phe Leu Leu Cys Leu Gly Leu Pro Leu Gly Phe Phe Trp Phe Leu Leu
 210 215 220
 Leu Trp Ile Lys Gly Ala Tyr Ser Val Leu Gly Tyr Arg Phe Tyr Phe
 225 230 235 240
 Ala Ser Ile Val Leu Thr Ala Val Asn Ser Cys Ala Asn Pro Ile Ile
 245 250 255
 Tyr Phe Phe Met Gly Ser Phe Arg Gln Arg Leu Gln His Lys Thr Leu
 260 265 270
 Lys Ile Val Leu Gln Ser Ala Leu His Asp Thr Pro Glu Thr Pro Glu
 275 280 285
 Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu Pro
 290 295 300

<210> 66
 <211> 1518
 <212> DNA
 <213> Mus musculus

<400> 66
 aacaacaaaa aaaaaaaaca gaaaaagaaa ttaaaagttg tgtccatagt gaaggcctca 60
 tttcttcttt gtgtttccag caacaccagt gcagggtttc tggacctaaa cacctcagcc 120
 tcggcaatag caccacaac aaccaaacca atggacgaaa ccatccctgg aagtattgac 180
 actgagaccc tgtatccaac acttgatgat catcatcttc ggactggctg ggctgacagg 240

```

aaatggcatt gtgttggtggc tcctggggctt ccacttgcaa aggaatgcct ttttagtcta 300
catcctaacc ttggccctag ctgacttcct ctaccttctc tgtcacatca tagattccac 360
aatgcttctt ctcaagggtt cccaccccaa ctggatcttg gtccattgct ttaggacccat 420
ccaaatTTTT ctctacatca caggcctgag catgctcagt gccatcagca cagagcgctg 480
cctgtctgtc ctgtgcccc tctggtatcg ctgccgccgc ccagaaaaca catcaactgt 540
gatgtgtgct gtgatctggg tcctgtcctt gttgatctgc attctgcatg gatatttttc 600
tgttatttct ctgggtctcag ttatgaaaat tactctgtgt gttttgcatc agcgatcatt 660
atcagttcat acccaacggt tttgcttgta gtccctctgtc tgtccaccct ggctctgctg 720
gccaggttgt tctgtgggtgc tgggaagagg aaattttcca gattattcgt gaccatcata 780
cttaccgttt tgggttttct tctctgtggg ttgccctggg gagccctctg gttcccatta 840
ctctggattc aggggtggtt ctggaaaaga ctttttcagg catcaattgt cctatcttct 900
gttaacagct gtgccaaccc catcatttat ttcttctgtg gtcattcag gcacgattg 960
aagcaccaga cccttaaaat ggttctccag aatgcactgc aggacactcc tgagacaact 1020
gaaaacatgg tggagatgtc aagaagtaaa gcagagccat gatgaagagc ctctgcctgg 1080
acctcagagg tggatttgga gtgagcactg ccctgctgca cttgaccact gtccactctc 1140
ctctcagctt actgacttgg aatgcctcag tgggtccaaa acaccttcaa aagctctcca 1200
ctgactaagt atttctacct atcccaagta atagcattaa tcagaaagta ccatgtctgc 1260
atccttcttg acattaatca aattctctta ctatcttcat ctgaaacttt cttgttggtt 1320
ctttggaact tttgttgcca tggtaatagc ccaagtccag caccatgact ttcttatctg 1380
tgattgttct atacctgaat gtaaaggcaa aggagccagg agatgatcct gtgttacagt 1440
gtcattacc caaacaccac caagagagct tgtctcccag gagtgcagac acgcctgtga 1500
acacaggtaa gaccacca
1518

```

<210> 67

<211> 303

<212> PRT

<213> Mus musculus

<400> 67

```

Met Asp Glu Thr Ile Pro Gly Ser Ile Asp Thr Glu Thr Leu Tyr Pro
 1          5          10          15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Gly
          20          25          30
Ile Val Leu Trp Leu Leu Gly Phe His Leu Gln Arg Asn Ala Phe Leu
          35          40          45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Leu Tyr Leu Leu Cys
          50          55          60
His Ile Ile Asp Ser Thr Met Leu Leu Leu Lys Val Pro Pro Pro Asn
65          70          75          80
Trp Ile Leu Val His Cys Phe Arg Thr Ile Gln Ile Phe Leu Tyr Ile
          85          90          95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser
          100          105          110
Val Leu Cys Pro Ile Trp Tyr Arg Cys Arg Arg Pro Glu Asn Thr Ser
          115          120          125
Thr Val Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile
          130          135          140
Leu His Gly Tyr Phe Cys Cys Tyr Phe Ser Gly Leu Ser Tyr Glu Asn
145          150          155          160
Tyr Ser Val Cys Phe Ala Ser Ala Ile Ile Ile Ser Ser Tyr Pro Thr
          165          170          175
Phe Leu Leu Val Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg
          180          185          190
Leu Phe Cys Gly Ala Gly Lys Arg Lys Phe Ser Arg Leu Phe Val Thr
          195          200          205
Ile Ile Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Trp Gly
210          215          220

```


Ala	Leu	Trp	Phe	Pro	Leu	Leu	Trp	Ile	Gln	Gly	Gly	Phe	Trp	Lys	Arg
225					230					235					240
Leu	Phe	Gln	Ala	Ser	Ile	Val	Leu	Ser	Ser	Val	Asn	Ser	Cys	Ala	Asn
				245					250					255	
Pro	Ile	Ile	Tyr	Phe	Phe	Val	Gly	Ser	Phe	Arg	His	Arg	Leu	Lys	His
			260					265					270		
Gln	Thr	Leu	Lys	Met	Val	Leu	Gln	Asn	Ala	Leu	Gln	Asp	Thr	Pro	Glu
		275					280					285			
Thr	Thr	Glu	Asn	Met	Val	Glu	Met	Ser	Arg	Ser	Lys	Ala	Glu	Pro	
	290					295					300				

<210> 68
 <211> 1500
 <212> DNA
 <213> Mus musculus

<400> 68

cattttcggg	ctggtcgggc	tgacaggaaa	taccattgtg	ttctggctcc	tgggcttctg	60
cttgacacagg	aatgcctttt	tagtctacat	cctaaacttg	gccctggctg	acttccctctt	120
ccttctctgc	cacatcataa	attccacagt	acttcttctc	aagggtcccc	tacccaactg	180
gatcttggtc	cattgcttta	acaccatcag	aattgttctt	tacatcacag	gcctgaacat	240
gctcagtgcc	atcaacatgg	agcactgcct	gtctgtcctg	tgccccatct	ggtatcactg	300
ctgccgcccc	gaacacacat	caactgtcat	gtgtgctgtg	atctgggtcc	tgtccctgtt	360
gatctgcatt	ctgaatgaat	atttctgtga	tttctttggg	accaaattgg	taaattacta	420
tgtgtgtctg	gcatcgaaact	tctttatggg	agcatacctg	ttgtttttgt	ttgtagtcct	480
ctgtctgtcc	accctggctc	tgctggccag	gttgttctgt	gggtgctgga	atacgaaatt	540
taccagattt	cacatgacca	tcttgctgac	ccctttgttc	tttctcctct	gcgggttgcc	600
ctttgccatc	taatgcttcc	tgttattcaa	gattaaggat	gatttccatg	tattttatat	660
taaccttttt	ctagcattag	aagtcctgac	ttctattaac	agctgtgaca	accccatcat	720
ctattttctc	ctggactcct	tcagacatca	ggagaagcac	cagaccctca	aaatggttct	780
ccagagtgca	ctgcaggata	ctcytgagac	acctgaaaac	atggcagaga	tgtcaagaag	840
caaagcagag	ccgtgatgaa	gagcctctgc	ctggatgtca	gaggtggctt	tggagtgagc	900
actgccctgc	tgcaattgac	cactgtcaac	tctactctca	gcttactgac	ttgtcatgcc	960
tcagtgggtc	aacaacacct	tcaaaagctc	tccactgact	tagtattttt	acctctccca	1020
agtagtagca	ttaatcagaa	agtatcatgt	ctgcatecct	cttgacatta	ttcaaattct	1080
catctaactt	catctgaaac	tttctcccta	tttctttgga	acttttggtg	ccatggkaat	1140
agcccagatc	cagcaccatg	actctcttgt	ctgtgattgt	tctgaacctg	aatgtaaaga	1200
caaaggagag	agaagatgat	cctgtgtcac	agtgtcatt	acccaagcac	cgccaagaga	1260
tcttgtctcc	caggagtgc	gacaagcctg	tgcgactgg	taagaccacc	acttttgctt	1320
aaaggacat	gcctggaact	ttcaagacag	agtaacagag	gagcaccctg	gaacaggata	1380
cttccagttt	ccaactgcac	accggagctg	accctatgca	acagctctcc	ataccaact	1440
tcttcccaca	aagaactggg	gctaccagga	gtactgacac	acaggttttc	aggaaggaca	1500

<210> 69
 <211> 283
 <212> PRT
 <213> Mus musculus

<400> 69

Ile	Phe	Gly	Leu	Val	Gly	Leu	Thr	Gly	Asn	Thr	Ile	Val	Phe	Trp	Leu
1				5					10					15	
Leu	Gly	Phe	Cys	Leu	His	Arg	Asn	Ala	Phe	Leu	Val	Tyr	Ile	Leu	Asn
			20					25					30		
Leu	Ala	Leu	Ala	Asp	Phe	Leu	Phe	Leu	Leu	Cys	His	Ile	Ile	Asn	Ser
	35						40					45			

Thr	Val	Leu	Leu	Leu	Lys	Val	Pro	Leu	Pro	Asn	Trp	Ile	Leu	Phe	His
50						55					60				
Cys	Phe	Asn	Thr	Ile	Arg	Ile	Val	Leu	Tyr	Ile	Thr	Gly	Leu	Asn	Met
65					70					75					80
Leu	Ser	Ala	Ile	Asn	Met	Glu	His	Cys	Leu	Ser	Val	Leu	Cys	Pro	Ile
				85					90					95	
Trp	Tyr	His	Cys	Arg	Pro	Glu	His	Thr	Ser	Thr	Val	Met	Cys	Ala	
			100					105				110			
Val	Ile	Trp	Val	Leu	Ser	Leu	Leu	Ile	Cys	Ile	Leu	Asn	Glu	Tyr	Phe
		115						120				125			
Cys	Asp	Phe	Phe	Gly	Thr	Lys	Leu	Val	Asn	Tyr	Tyr	Val	Cys	Leu	Ala
	130					135					140				
Ser	Asn	Phe	Phe	Met	Gly	Ala	Tyr	Leu	Leu	Phe	Leu	Phe	Val	Val	Leu
145					150					155					160
Cys	Leu	Ser	Thr	Leu	Ala	Leu	Leu	Ala	Arg	Leu	Phe	Cys	Gly	Ala	Gly
				165					170					175	
Asn	Thr	Lys	Phe	Thr	Arg	Phe	His	Met	Thr	Ile	Leu	Leu	Thr	Pro	Leu
		180						185					190		
Phe	Phe	Leu	Leu	Cys	Gly	Leu	Pro	Phe	Ala	Ile	Cys	Phe	Leu	Leu	Phe
	195						200					205			
Lys	Ile	Lys	Asp	Asp	Phe	His	Val	Phe	Tyr	Ile	Asn	Leu	Phe	Leu	Ala
	210					215					220				
Leu	Glu	Val	Leu	Thr	Ser	Ile	Asn	Ser	Cys	Asp	Asn	Pro	Ile	Ile	Tyr
225					230					235					240
Phe	Phe	Leu	Asp	Ser	Phe	Arg	His	Gln	Glu	Lys	His	Gln	Thr	Leu	Lys
			245						250					255	
Met	Val	Leu	Gln	Ser	Ala	Leu	Gln	Asp	Thr	Pro	Glu	Thr	Pro	Glu	Asn
		260						265					270		
Met	Ala	Glu	Met	Ser	Arg	Ser	Lys	Ala	Glu	Pro					
	275						280								

<210> 70
 <211> 2504
 <212> DNA
 <213> Mus musculus

<400> 70
 gtgtgtgcct tgggtttttat tgcttatggt tttgtccttg catcttgcca tctgggttatc 60
 tctgggtatta gctgggtcttg atgtctctga ttgtccttgc ccctcctgca agcctgtgtg 120
 tcatttctcc tgggagacca gttatttcta gaagaaattt aggtatgggg agttgtggca 180
 cagggtcagc cccaggggtgc agatgaaaac tggaaggatc ctgtcccagg tgcgtcctct 240
 atttctgtgt cctgcgggtt ctgggcatgt ccctttgagc agaagtgttg gtcttacctg 300
 tgctcacagg cttgtctgca ctgtggcaca agatcatctc ctggctcctt tgtctttaca 360
 ttcaggtaca gamcaatcmc cagacaagag agtcatgctt ctggacttgg gctatttcca 420
 tggcaacaaa agttccaaag aaacamcaag aaaggttcag aggaagttag catgagaatt 480
 tgattaatgt cataaaggat gcagacatga tactttctga ttaatgatat tactcgagag 540
 aggtagaaaa tctaagtcag tggagagctt ttgaagatgt tgggtggacca ctgagggcatg 600
 tcaagtcagt cagcggagag cagagtggac agtgataaag tgcagcaggg cattcttcac 660
 tccaaagcca cctctgaggt ccaggcagag gctcttcac atggctctgc tttacttctt 720
 gacatcccca ccatgttttc aggtgtctca ggagtgtcct acattgtcct ctggagaacc 780
 attttcagtg tctgggtgctg caaccgaagc ctgaaggagc ccgtgaagaa gtaaagtatg 840
 gagttggcac aactgttaat agcagtcatg acaagtgtt ccagataaaa tacaagagta 900
 aatacatgaa aagcatcctt aatcttgcac aacagaaacc agtagatgcc aaagttcaat 960
 ctgcaaagga gaaaaccaga gcagtcagca ggatgggtcac atactatctg gtaagcttca 1020
 tttgcccac atcacagaac aacctggcca gcagagccag gctggaaaga cagagatcca 1080
 caaacaaaac atcaggtatg cagaagtaaa gaagttcaat gccagacacc cattgtcatt 1140

```

ttcatatattg ctatgtaaga aacctcagaa ataactattc agaatgcaga tcaacagggg 1200
cagtaccag atcacagcac acatggcagc tgatgtatgt tctgggtggg gacagcaatc 1260
ccagatgggc acagtacaga caggccgtgc tcagtgtgta tggcagtgag catgtctcagg 1320
cctgcatgt agagaaccat catgatgatg taaaagcaca agataaagat aatggggtag 1380
aaaacattga gaagaagcag tatggaatct atggtgtgac ctaggaggaa gaagaagtca 1440
gccaggtcca agtttaggat gtagaccttg aaagcattcc tgcgcaaggg gaagtgcagg 1500
atccagaaga caatggaatt tcctgtcagc ccaaccagtc cgaagatgat gggtatcaag 1560
tttgggatca gaatcctgat gttgatacct ccagggatgg ttttgtccat tggatttgct 1620
gttgtgggtg ctggtgggtga ggctgatgtg tttagggccca gaaactctgc accagtgtctg 1680
ctgggaacac aaagaaaaaa tgaggccttc cctatgaact caccttttgt tttccttttt 1740
gttggatttt taatttcttc tattgcatat tttaaattat ttgctttcct gtgtccccc 1800
ccctcccttt cctgaaaacc cctatcccac cctccctcta ccctgcttac tattgaggat 1860
attcctccac ccactcccac ctctctgccc tctattgccc tacactgggg caactatcaa 1920
gccttcatag atccatagaa ctcttctccc atttattcat gacagggccca tcctctgcta 1980
catatgcagc tggagccatg tgtacttctt tgctgatggc ttgtcccctg ggtgctgggg 2040
gattggtact ggttgggtga tattgttttt cttacctatg ggcttgcaaa ccccttcaac 2100
tcccttagtc ctttctctaa ttcttctatt agggaccctg ttctcagtct aatggctgga 2160
tgctaacatc tgcctctgta tttgtaaggc tctgacagtg cctctcaaga aacagccata 2220
ttaggtcctt gtcagcatgc acttcttgca atccacaata gtgtctgggt ttggttaactg 2280
tatatggtac gaatccccag gtgggacagt gtctgtgtga tctttccttt agtctttgct 2340
ctagacttta tctccataaa aagtattttg ttctccttct aaaaagcact gaagcaccca 2400
ctctttggtc tttcttcttc atggacttca tgtggtctgt gaattttaac ctggttattt 2460
ttcagttttt gagctcctat tcacttatca gtgagtgcac acca 2504

```

<210> 71

<211> 301

<212> PRT

<213> Mus musculus

<400> 71

```

Met Asp Lys Thr Ile Pro Gly Gly Ile Asn Ile Arg Ile Leu Ile Pro
 1          5          10          15
Asn Leu Ile Thr Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ser
 20          25          30
Ile Val Phe Trp Ile Leu His Phe Pro Leu Arg Arg Asn Ala Phe Lys
 35          40          45
Val Tyr Ile Leu Asn Leu Asp Leu Ala Asp Phe Phe Phe Leu Leu Gly
 50          55          60
His Thr Ile Asp Ser Ile Leu Leu Leu Leu Asn Val Phe Tyr Pro Ile
 65          70          75          80
Ile Phe Ile Leu Cys Phe Tyr Ile Ile Met Met Val Leu Tyr Ile Ala
 85          90          95
Gly Leu Ser Met Leu Thr Ala Ile Ser Thr Glu His Gly Leu Ser Val
 100          105          110
Leu Cys Pro Ile Trp Asp Cys Cys His His Pro Glu His Thr Ser Ala
 115          120          125
Ala Met Cys Ala Val Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu
 130          135          140
Asn Ser Tyr Phe Gly Phe Leu His Ser Lys Tyr Glu Asn Asp Asn Gly
 145          150          155          160
Cys Leu Ala Leu Asn Phe Phe Thr Ser Ala Tyr Leu Met Phe Leu Phe
 165          170          175
Val Asp Leu Cys Leu Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe Cys
 180          185          190
Asp Val Gly Gln Met Lys Leu Thr Arg Tyr Val Thr Ile Leu Leu Thr
 195          200          205
Ala Leu Val Phe Leu Leu Cys Arg Leu Asn Phe Gly Ile Tyr Trp Phe

```

210	215	220
Leu Leu Cys Lys Ile	Lys Asp Ala Phe His Val	Phe Thr Leu Val Phe
225	230	235
Tyr Leu Glu Ser Leu	Val Met Thr Ala Ile Asn	Ser Cys Ala Asn Ser
245	250	255
Ile Ile Tyr Phe Thr	Gly Ser Phe Arg Leu	Arg Leu Gln His Gln
260	265	270
Thr Leu Lys Met Val	Leu Gln Arg Thr Met Asp	Thr Pro Glu Thr Pro
275	280	285
Glu Asn Met Val Gly	Met Ser Arg Ser Lys Ala	Glu Pro
290	295	300

<210> 72
 <211> 2758
 <212> DNA
 <213> Mus musculus

<400> 72

```

aatttttgtg tttcctcttt aagggtcttct accaattttat ctgtgtttctc ctgtattatt 60
ttaagggagt tatttatgtc tttcttaatg tcctctatca tcatcatcat catccttata 120
attttcatca tcatcaccag aggtgacttt aaatcagagt catgcttttc tgggtgtgttg 180
gagtatccag ggctcaccat gttgagagaa ctaggttctg atgatgcaa gtagccttgg 240
ttcccattgc ttatgttttt gcccttgccct cttgccatct gattatctct ggagtaagct 300
ggtccttgctc tctctaactg tggcttgctc ctcctgcaag cctatgtgtc agtactcctg 360
gtagaccagt tctttctggg agaaatttgg gtatggagag ctgtggcaca gggtcagctc 420
cggggtacag ttggaaactg gaagtatcct gtcccaggct gtcctctgtt tcctgtgtcc 480
tgaggattcc aggcattgtc atttaagcag aagtgggtgt cttacctatg ttcacaggca 540
tatctgcact cctgggagac aagctttctt ggtggtgttt gggtaatgag cactgggaca 600
caggaacatc tcctggctcc tttgtcttta catttggtta cagaacaatc acagacaaga 660
gagtaattgt gctgaacctt agctattacc atggcaacaa aagttccaaa gaaacagcaa 720
gaatgtttca gatgaagtta gtatgagaat tggattaatg tcaggaagga tgcagacatg 780
gtactttctg attaatgcta ttacttggga gaggtagaaa tactaagtca gtggagagct 840
tttgaagggt ttgttgacc actgaggaat gccaaagtcag taagctgaga ggaaagtgga 900
cagtgggtcta gtgcagcatg gcagtgtcct ctccaaagcc acctctgagg tccaggcaga 960
ggctcttcat catggctctg ctttgcttct tgatatatcc accatgtttt cagggtgtctc 1020
aggagtgtcc tgcaatgcac tctggagaac cattttgagg gtcttgtgtc tcaacggatg 1080
cctgtatgag cccacgaaga agtaaatgat ggggttggca cagctgttaa cagcagttag 1140
gacaagtgat gccagaaaga atctatagtc tagtatactg aaaccaccct caatccaggg 1200
taacaggaac cagaggaagc ccaggggcaa cccacagaga agaaaaacca aaatgggtcac 1260
catgatggtc atgaataatc tggtaaatct cttctttcca gcaccacaga acaacctggc 1320
cagcagagtc agggtagaaa aacagaggac tacaacaaa aaaatagggt atattctgat 1380
gaagaattct gatgcctgac acacagagtt aatttcatat ttgggaccaa ataaatcaca 1440
gaaatatctg ttcagaaggc agatcaacag gggacaggac ccagatcacg acacacatga 1500
tggttgatgt gtgttmtggg cgggtggcagc gataccagat ggggcacagg acagacaggc 1560
agcgmtcagt gctgatggca ctgagcatgc tcaggcctgt gatgtagaga accgttctga 1620
tgggtgtcaa gcaatggatg aagatactgt tgtgtgggcg aaccttgaaa agatgcattg 1680
tggaatttat gatgtgacag agaagaaaga aggaagtcag ccagggccaa gtttaggatg 1740
tagactaaga tggcattcct gtgaaatcgg aagcccagga tccagaatac aatggcattt 1800
ccagtcagcc caaccagtcc gaagatgatg atcatcaagt gtgggataag ggtctcgatt 1860
tcaatacttc cagagatggg ttcattccatt ggatttgttg tcgtgggtgc cattgctgag 1920
gctgaggtgt ttagggccag aaaccttgca ctggtattgc tggaaacaca aacaagaaat 1980
gaggccttca ctgtgaacac aacttttaat ttctttcttt ttgtttgttt gtttgtttgt 2040
ttgtgggggt ttgttttttt ttttaatttt tttttgtatt agatattttc ttcattttaat 2100
tttcaaattg tatccctttt cctggctttc cccctccca gaaacccctt tctgatcctc 2160
ccacctctt caaccacac acccacttcc acctctctgc ccctgattcc cttacactgg 2220
agcatctata gaaccttcat aggttcaagg acctcttctt ccatccatgc aagacatggc 2280

```

```

catcatctgc tacatatgca tctggagcca cacgtactcc tttgttgatg gcttagtccc 2340
tgggagttca gggggtgggg gtgggggtgg gggcagtggt ctcttggttc atactgttgc 2400
tcttcttatg gagcttcaaa ccaattcaac tccctcaggc ctttctctaa ctctctatt 2460
agggaccctg tgctcagttt aattgttggc tgctaacatc agactctgca tttgaaaggc 2520
cctgacatgg cctcttagga aacagctata tcaggttccg gtcagcattc actccttgac 2580
atccacaata gtgtctgcat ttggtaactg tgtatgagat gaatccccag gtggaacatt 2640
ctctgggtga cttttccttt agtgtctgtt ctacacatta tctccatatt tgctcttgtg 2700
agtattttgt tcttcttcta agaaggctcg aaacaccac actttcgtct tccttgtt 2758

```

<210> 73

<211> 304

<212> PRT

<213> Mus musculus

<400> 73

```

Met Asp Glu Thr Ile Ser Gly Ser Ile Glu Ile Glu Thr Leu Ile Pro
 1          5          10          15
His Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Gly Asn Ala
 20          25          30
Ile Val Phe Trp Ile Leu Gly Phe Arg Phe His Arg Asn Ala Ile Leu
 35          40          45
Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Phe Phe Phe Leu Leu Cys
 50          55          60
His Ile Ile Asn Ser Thr Met His Leu Phe Lys Val Arg Pro His Asn
 65          70          75          80
Ser Ile Phe Ile His Cys Phe Asp Thr Ile Arg Thr Val Leu Tyr Ile
 85          90          95
Thr Gly Leu Ser Met Leu Ser Ala Ile Ser Thr Asp Arg Cys Leu Ser
100          105          110
Val Leu Cys Pro Ile Trp Tyr Arg Cys His Arg Pro His Thr Ser Thr
115          120          125
Ile Met Cys Val Val Ile Trp Val Leu Ser Leu Leu Ile Cys Leu Leu
130          135          140
Asn Arg Tyr Phe Cys Asp Leu Phe Gly Pro Lys Tyr Glu Ile Asn Ser
145          150          155          160
Val Cys Gln Ala Ser Glu Phe Phe Ile Arg Ile Tyr Pro Ile Phe Leu
165          170          175
Phe Val Val Leu Cys Phe Ser Thr Leu Thr Leu Leu Ala Arg Leu Phe
180          185          190
Cys Gly Ala Gly Lys Lys Lys Phe Thr Arg Leu Phe Met Thr Ile Met
195          200          205
Val Thr Ile Leu Val Phe Leu Leu Cys Gly Leu Pro Leu Gly Phe Leu
210          215          220
Trp Phe Leu Leu Pro Trp Ile Glu Gly Gly Phe Ser Ile Leu Asp Tyr
225          230          235          240
Arg Phe Phe Leu Ala Ser Leu Val Leu Thr Ala Val Asn Ser Cys Ala
245          250          255
Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Tyr Arg His Pro Leu Lys
260          265          270
His Lys Thr Leu Lys Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro
275          280          285
Glu Thr Pro Glu Asn Met Val Asp Ile Ser Arg Ser Lys Ala Glu Pro
290          295          300

```

<210> 74

<211> 1738

<212> DNA
<213> Mus musculus

<400> 74

```
caccacacaac aaccaaattcc aatggacgaa accatcccct ggaagtattg acatcaagac 60
cctgatcgca aatttgatga tcatcatctt cggactgggc gggctgacag aaactgcctt 120
tgtgttctga ctccctgggct tccacttgca caggaacgcc ttcttagtct acatcctaaa 180
cttggccctg actgacttcc tcttccttct ctgtcacatc ataaattcca cagtgtattct 240
tctcaatggt cccctaccta acatgatctt ggtccattgc tttagcacca tcagaatatt 300
tctcaacatc acaggcctaa gcattctcag tgccatcagc actgagcgct gcctgtctgt 360
cctgtgcccc atctggtatc gctgccacca ccagaacac acatcaactg tcatgtgtgc 420
tgtgatctga gtcctgtccc tgttgatttg cactctgtat agatatttct gttttttctt 480
tggtcccaaa tatgtatttg actctgtgtg tctggcaacg acctacttta tcagaacata 540
cccaatgttt ttgtttatgg tctctgtctt gtccactctg gctctgctgg ccagggtgtt 600
ctgtgggtgct gggaagamra aatttaccag gattattcgt gaccatcatg ctgacygttt 660
tggtttttct tctctgtggg atgcccctag gcttcttctg gttcgtgttc ccatggatta 720
actgtgattt cagtgtacta gattatagac tttttctggc atcaattgta ctaactgctg 780
ttaacagtta tggcaacccc atcatttact tcttcgtggg ctcttcagg aatcggttga 840
agcaccagac cctccaaaag gttctccaga gtgcactgca cgacactcct gagacacctg 900
aaaacatggt agagatgtca agaagcaaag cagagccatg atgaagagtc tctgacagga 960
cttcagaggt ggctttggag tgagcactgc cctgctgcac ttaaccacac tccactctcc 1020
tctcagctta ctgactatgg atgcctcagt ggtccaacaa tgccttcaaa agctctccac 1080
tgacttagta tttctacctc tcccaagtaa tagcattaat cagaaagtac catgtctgca 1140
tcttcttga cattaatcca attctcatc taacttcac tgtaactttc ttgctgtttc 1200
tttggaaact ttgttaccat agtaatagcc taggtccagc accatgattc ccttgtctgt 1260
gattgttctg tacctacctg aatgtaaagc aaagttagcca ggagatgttc ctgtgtacca 1320
gtgctcatta cccaacacc accaagaaag cttgtctccc aggagtgcag acaagcctgt 1380
gaacacaggt aagaccacca cttctgctta aaggggcatg cctggaaccc tcaggacaca 1440
ggaacagagg agcagcctgg gacaggatac ttccagtttc caactgcact ccagagctga 1500
ccctgtgcca cagctctcca tacccaaatt cctcccagaa agaattggtg taccaggagt 1560
actgacacac aggcttgtag aaggaacaag ccacagtcaa agtttagcaag acctgctaac 1620
accagagata accagatggc aagacacaag ggcaaaaaca taagcaatgg gaaccaagac 1680
tacttggcat catcagaac tagttctctc aacatggtga gccatggata cttcaaca 1738
```

<210> 75
<211> 303
<212> PRT
<213> Mus musculus

<400> 75

```
Met Asp Glu Thr Ile Pro Gly Ser Ile Asp Ile Lys Thr Leu Ile Ala
 1           5           10          15
Asn Leu Met Ile Ile Ile Phe Gly Leu Val Gly Leu Thr Glu Thr Ala
 20          25          30
Phe Val Phe Leu Leu Gly Phe His Leu His Arg Asn Ala Phe Leu Val
 35          40          45
Tyr Ile Leu Asn Leu Ala Leu Thr Asp Phe Leu Phe Leu Leu Cys His
 50          55          60
Ile Ile Asn Ser Thr Val Ile Leu Leu Asn Val Pro Leu Pro Asn Met
 65          70          75          80
Ile Leu Val His Cys Phe Ser Thr Ile Arg Ile Phe Leu Asn Ile Thr
 85          90          95
Gly Leu Ser Ile Leu Ser Ala Ile Ser Thr Glu Arg Cys Leu Ser Val
100         105         110
Leu Cys Pro Ile Trp Tyr Arg Cys His His Pro Glu His Thr Ser Thr
115         120         125
Val Met Cys Ala Val Ile Val Leu Ser Leu Leu Ile Cys Thr Leu Tyr
```

130		135		140
Arg Tyr Phe Cys Phe Phe Phe Gly Pro Lys Tyr Val Phe Asp Ser Val				
145		150		155
Cys Leu Ala Thr Thr Tyr Phe Ile Arg Thr Tyr Pro Met Phe Leu Phe				160
		165		170
Met Val Leu Cys Leu Ser Thr Leu Ala Leu Leu Ala Arg Leu Phe Cys				175
		180		185
Gly Ala Gly Lys Lys Lys Phe Thr Arg Leu Phe Val Thr Ile Met Leu				190
		195		200
Thr Val Leu Val Phe Leu Leu Cys Gly Met Pro Leu Gly Phe Phe Trp				205
		210		215
Phe Val Phe Pro Trp Ile Asn Cys Asp Phe Ser Val Leu Asp Tyr Arg				220
225		230		235
Leu Phe Leu Ala Ser Ile Val Leu Thr Ala Val Asn Ser Tyr Gly Asn				240
		245		250
Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Asn Arg Leu Lys His				255
		260		265
Gln Thr Leu Gln Lys Val Leu Gln Ser Ala Leu His Asp Thr Pro Glu				270
		275		280
Thr Pro Glu Asn Met Val Glu Met Ser Arg Ser Lys Ala Glu Pro				285
		290		300

<210> 76
 <211> 1011
 <212> DNA
 <213> Mus musculus

<400> 76
 aagaggaaac acatatatattt gggatgttaa ccaagggtttt ctatagggaa caatggaaaa 60
 ctgttcactt caagattaca gtttagctgc atgattaaac tttaaattga cattaacatt 120
 taattactgg gttttataaa ggtcctgaga tattttaagg tggattgtct tttatattat 180
 gatattaata tgcttagaac aaagaaagaa aagttttattg ttcaatgggtg aagtgtcttt 240
 taaatagaag tgggcagagt gtcctggcaa acctcaattt ttaccttgac acagattaaa 300
 gtcgtatgag aggagaaatc acaacagcag aatgacaac tgaggaattg tctagattat 360
 cttggcctgt gggcatgatt atgaggaatt atctttaaca taaattaatg taagcaaaca 420
 tggcttatgg taggttgcac caataagcta ctttaagcagg acctgtaatc atccagaatt 480
 ggagcttgga aggagtgttt cttgtagata ctgttccttg tgttccttga gttcctgaca 540
 tgacttcctt cactgatgga gtctgtacta agagtataag ccagataacc cattttattt 600
 tctaggatgt ttgtggtcaa aatgttttcc catgaaacag aaaaggaaac tagaacatgc 660
 acaaattacc taacagatat ttattaagtt agagaatatt ctaagttata caaatactaa 720
 aggaaactac aaatgtggat ctattaaatt cttattttaa caaatctgt agagatgata 780
 aattgttaaa aatgtcataa attttcaatc actatcaagt tcagttacca atgaaattca 840
 gttattaact gaaaactcct gatctttgga tgaagaaggg gcttgtcaaa aatgggagca 900
 gtcttgacc tataattatt acagtgggtc tcatctcaag gggatccagt gaagtgtcat 960
 taagaggaga gtaggaaagt tcaacatagt atttctatta aaagtgtgt a 1011

<210> 77
 <211> 274
 <212> PRT
 <213> Mus musculus

<400> 77
 Leu Leu Ser Ile Ile Ala Phe Ile Gly Leu Ala Glu Asn Ala Ile
 1 5 10 15
 Val Leu Trp Leu Leu Gly Phe His Met His Arg Asn Ala Phe Ser Val
 20 25 30

Tyr Ile Leu Asn Ala Gly Ala Asn Phe Leu Phe Leu Cys Pro Tyr Ile
 35 40 45
 Val Phe Ser Leu Val Thr Ile Thr Val Asn Phe His Ser Ile Asn Ser
 50 55 60
 His Ile Ile Leu Phe Leu Asn Thr Val Phe Thr Leu Ala Tyr Leu Ala
 65 70 75 80
 Gly Val Ser Met Ile Thr Ala Ile Ser Val Glu Tyr Trp Leu Ser Val
 85 90 95
 Ile Trp Ser Asn Trp Tyr His Gly Arg His Pro Lys His Thr Ser Ala
 100 105 110
 Phe Ile Cys Thr Leu Leu Trp Ala Val Ser Leu Leu Leu Ser Leu Pro
 115 120 125
 His Glu Ile Ile Cys Gly Leu Leu Asp His Ile Tyr Asn Trp Asp Met
 130 135 140
 Cys Trp Lys Cys Lys Leu Ile Ile Val Val Trp Leu Leu Ile Glu Phe
 145 150 155 160
 Val Val Leu Ser Gln Ser Asn Gln Ala Met Met Phe Arg Ile Phe Cys
 165 170 175
 Gly Ser Gln Gln Thr Pro Met Thr Arg Leu Phe Val Thr Ile Val Leu
 180 185 190
 Thr Ala Leu Val Val Leu Ile Cys Gly Phe Pro Leu Gly Ile Tyr Ile
 195 200 205
 Tyr Phe Leu Tyr Trp Thr Thr Asp Val Tyr Phe Ile Met Pro Cys Asn
 210 215 220
 Ser Phe His Glu Thr Ile Leu Leu Leu Ser Ala Val Asn Ser Cys Ala
 225 230 235 240
 Asn Pro Ile Ile Cys Leu Leu Val Gly Ser Ile Lys His Cys Gln Phe
 245 250 255
 Gln Cys Gly Thr Leu Arg Leu Ile Leu Gln Arg Ala Ile Gln Asp Thr
 260 265 270
 Pro Glu

<210> 78
 <211> 1358
 <212> DNA
 <213> Mus musculus

<400> 78
 taaattactg aatctctgtg atcctgattc cctctcttta tggacctgtg cctgacatac 60
 ccacatagtc acatggtcct gacagaaact atcatgtgtt catatctcta tgtcttttca 120
 ggaatgtcag tggaaaattc ctaagcatgg gtacaactag cctggcctgg aacattaaca 180
 acacagctga aaatggaagc tacactgaaa tgttctcctg tatcaccacg ttcaataccc 240
 tgaattttct tactgtcatc attgctgtgg ttgtcctggc aggaaattcc atagtgtctat 300
 ggcttctagc cttccacctg cacaggaatg ccttcttctg ctatgtcctc aatctggctg 360
 gtgctgattt cttgtacctt tgcactcaga ttgtgtattc cctggagtgt gtcattcagt 420
 ttgataaaag ctctttttat attctcctca ttttatcaat gtttgcttac cttgcaggat 480
 tgagtatgat tgcaaccatc agtactgagc gctgcctatc tggtatgtgg cccatctggg 540
 atcactgcca aagaccaaga cacacatcag ccatcatgtc tgttctgctc tgggttttct 600
 ctatactggt gagcctcctg gtaggactag gctgtgggtt tctgttcaga tattctgaat 660
 attatttctg tattactttg aactttatca ctgctgcatt tatcataggg ttatctgtgg 720
 ttctttctgt atctagcctg accctggttg tcaagatcat ctgtggatca cacaggatac 780
 ctgtgaccag gttgtttgtt accatttgcct ctcacagtgg tggcttctat aatctttggc 840
 atgccccttg gaatctgctg gttcctcttt ccaagtatta ttgagtttca taaaattttc 900
 tctaacaatt tttatgaaat gatagcattc ctgtcatgta ttaaatgttg tgccaatccc 960
 atcatttact tccttggttg ctctattagg caccacaggt tgaaatggca gtctcttaag 1020


```

ctacttcttc agagagccat gcaggacact cctgaggaag tgagtggaga gaggggtcct 1080
tcagaaaggt ctggggaact ggaaagagtc tagtgacagta gtggagttag tccttgatca 1140
gatatagttt ctctgagagt caattttgcc tttatctatt taggcaattt tcacagtctt 1200
gttcaatcag tagagaaaat agtcatttta tagaaattag gaggaacagg cttgttacac 1260
agaaactgac ttgcagcacc ataaagctgc cttatgtggt gctcagtgc tcccctcgtg 1320
atataagcct tgtaatcact tggggccaga acagctcc 1358

```

<210> 79
 <211> 268
 <212> PRT
 <213> Mus musculus

```

<400> 79
Phe Leu Thr Val Ile Ile Ala Val Val Val Leu Ala Gly Asn Ser Ile
 1          5          10          15
Val Leu Trp Leu Leu Ala Phe His Leu His Arg Asn Ala Phe Phe Val
 20          25          30
Tyr Val Leu Asn Leu Ala Gly Ala Asp Phe Leu Tyr Leu Cys Thr Gln
 35          40          45
Ile Val Tyr Ser Leu Glu Cys Val Ile Gln Phe Asp Lys Ser Ser Phe
 50          55          60
Tyr Ile Leu Leu Ile Leu Ser Met Phe Ala Tyr Leu Ala Gly Leu Ser
 65          70          75          80
Met Ile Ala Thr Ile Ser Thr Glu Arg Cys Leu Ser Val Met Trp Pro
 85          90          95
Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala Ile Met Ser
 100         105         110
Val Leu Leu Trp Val Phe Ser Ile Leu Leu Ser Leu Leu Val Gly Leu
 115         120         125
Gly Cys Gly Phe Leu Phe Arg Tyr Ser Glu Tyr Tyr Phe Cys Ile Thr
 130         135         140
Leu Asn Phe Ile Thr Ala Ala Phe Ile Ile Gly Leu Ser Val Val Leu
 145         150         155         160
Ser Val Ser Ser Leu Thr Leu Leu Val Lys Ile Ile Cys Gly Ser His
 165         170         175
Arg Ile Pro Val Thr Arg Leu Phe Val Thr Ile Cys Phe Thr Val Val
 180         185         190
Val Phe Ile Ile Phe Gly Met Pro Leu Gly Ile Cys Trp Phe Leu Phe
 195         200         205
Pro Ser Ile Ile Glu Phe His Lys Ile Phe Ser Asn Asn Phe Tyr Glu
 210         215         220
Met Ile Ala Phe Leu Ser Cys Ile Asn Ser Cys Ala Asn Pro Ile Ile
 225         230         235         240
Tyr Phe Leu Val Gly Ser Ile Arg His His Arg Leu Lys Trp Gln Ser
 245         250         255
Leu Lys Leu Leu Leu Gln Arg Ala Met Gln Asp Thr
 260         265

```

<210> 80
 <211> 2387
 <212> DNA
 <213> Mus musculus

```

<400> 80
gggcctgagg cacaaacctc tcgggctggc agatccctgc gcactcacca tgtaaggtgg 60
ccggttgctt ggacgaggaa ttatctttaa cacatgttaa tgcaagcaaa catggcctat 120

```

```

ggtaagttgc accaaaaagc tacctaagca ggacctgtaa ccaatccaga attgcagcta 180
ggaaggagag tttcctgtag acactgttcc ttgtgctgct tgagtttctg acatgacttc 240
cttcaactgat ggactctgta ctgagaggat aagccagata acccatttta tctcctagga 300
tgtttgtggt caaaatgttt tcccatgaaa tagaaaagga aactagaaca ggcacaaatt 360
gcctaaaaga tatttattaa gttagagaat attctaagtc atacaaatac taaaggaaac 420
tacaaatgtg gatctattaa attcttattt atcatctgta gagatgataa attgttataa 480
atgtcatata cctttcatca ctatcaagtt cagtgaccaa tgataatcag ttattacctg 540
aagactattg atctttggat gaagaagggg cttgtcaaaa atgggagcag tcctggaccc 600
ataattatta cagtgggtct catctcaagg ggatccagtg aagcgtcatt aagaggagag 660
taggaacgtt caacacacta tttctattaa aagtgggtgta ctgatctact ttcaagggaa 720
tggttaatat cccaactgat ttcacctcag gccatcaact cagcagggtt gtagaaatgc 780
cccaaaagga taagggcaaa tttgtcctat aagttctctt gtgtatcatc acagcagctc 840
tcagttgcat cactagagtg tagtactctc ttcactctct tcacctcctt cttgttctac 900
aacttcttca acttcttcat cttcttctct agggctctct tgaatggctc tctgaagaat 960
cagcctgaga gtccacact ggaattggca gtgcttaatt gagccaaca ataagcaa 1020
gataggattg gcacagctgt taacaccgga tagtaggaga attgtctcat aaaaataacc 1080
acaaggcata attgaattct cttctttctt ccagtaaaag aagcatatgc caatcccaa 1140
gccacagatc aagacgacca gtgctgtaag cataatggtc acaagcagcc tggtcacagg 1200
tgtctgctgt gaaccacaga agaccctgaa cagcagggtt tgattggatc tagaaagaac 1260
cacaaataaa acaagtaacc atacaactat gatgagagca agtttccaac acatatccca 1320
gttataaata taatccagca ctttacaat tatccaattc caaagggtca acagaagggg 1380
aaaaaaccca gagcagagta caaatgacag ttgatgtgtg ttttgggcgt tgggcatgat 1440
accaagtggg ccaaaggaca gacaaccagt actccacact aatggctgtg atcatgctca 1500
cccctgcaag gtatgccagt atggtcacat tgacagaaaa caacgccc atgtaatgtcg 1560
atgtagttaa actgccta atgattttcc agggaaaata caatgtgagt gcagaggaag 1620
aggaagtttg cccagacag gttgaagatg tagacagaga aggcattcct gtgcatgtgg 1680
aagcccagaa gctgcagcac tatgacattt cctgtcagtc caatgatggc aatgataatg 1740
gaaagcaaac tcatggcaag ggacatgtca caagatgaag attccatgaa gtagctttca 1800
ttctgttctc tgaattcaat attccagtct ggggaagctt aatccatgtt tgggaacact 1860
cctggaataa aaaacaagac ataatcgcat gctttgcatt ctctaattca caagaccacc 1920
ctgatatttg taagctgata tggcacaaaa tgatggaaaa tgagcttaag aaatttatca 1980
aaaccagtat gtttagagac ttctttttaa accagtctga atttatttgg gttatctaca 2040
atccatgtca tgtactaaca cgaatgtagt tgatgggtcca agtatacacc ccaagtgtct 2100
catgttgtgt ggcagaatga aatggaacac tgaacctgta ggggtttgag tataatggca 2160
tccatcaatc catacatttg aatatacagt cactgttttg tggaactgtt tggagaaggg 2220
ttatatgtag gggtaatct gatgctaagg tcctgctccc caatcagtta ttgatatgtt 2280
gctaaagaaa gacattggcc ctctgctggt caggggggag ggcaaagggt gatttacagg 2340
actttgggta cctggagtca agcagagaga tgcaagagag gaaagga 2387

```

<210> 81

<211> 273

<212> PRT

<213> Mus musculus

<400> 81

```

Leu Leu Ser Ile Ile Ile Ala Ile Ile Gly Leu Thr Gly Asn Val Ile
 1             5             10             15
Val Leu Gln Leu Leu Gly Phe His Met His Arg Asn Ala Phe Ser Val
 20             25             30
Tyr Ile Phe Asn Leu Ser Gly Ala Asn Phe Leu Phe Leu Cys Thr His
 35             40             45
Ile Val Phe Ser Leu Glu Ile Ser Leu Gly Ser Phe Thr Thr Ser Thr
 50             55             60
Phe Thr Trp Ala Leu Phe Ser Val Asn Val Thr Ile Leu Ala Tyr Leu
 65             70             75             80
Ala Gly Val Ser Met Ile Thr Ala Ile Ser Val Glu Tyr Trp Leu Ser
 85             90             95

```

Val	Leu	Trp	Pro	Thr	Trp	Tyr	His	Ala	Gln	Arg	Pro	Lys	His	Thr	Ser
			100					105					110		
Thr	Val	Ile	Cys	Thr	Leu	Leu	Trp	Val	Phe	Ser	Leu	Leu	Leu	Thr	Leu
		115					120					125			
Trp	Asn	Trp	Ile	Ile	Cys	Lys	Val	Leu	Asp	Tyr	Ile	Tyr	Asn	Trp	Asp
	130					135						140			
Met	Cys	Trp	Lys	Leu	Ala	Leu	Ile	Ile	Val	Val	Trp	Leu	Leu	Val	Leu
145					150					155					160
Phe	Val	Val	Leu	Ser	Arg	Ser	Asn	Gln	Ala	Leu	Leu	Phe	Arg	Val	Phe
			165						170					175	
Cys	Gly	Ser	Gln	Gln	Thr	Pro	Val	Thr	Arg	Leu	Leu	Val	Thr	Ile	Met
			180					185					190		
Leu	Thr	Ala	Leu	Val	Val	Leu	Ile	Cys	Gly	Phe	Gly	Ile	Gly	Ile	Cys
		195				200						205			
Phe	Phe	Tyr	Trp	Lys	Lys	Glu	Glu	Asn	Ser	Ile	Met	Pro	Cys	Gly	Tyr
	210				215						220				
Phe	Tyr	Glu	Thr	Ile	Leu	Leu	Leu	Ser	Gly	Val	Asn	Ser	Cys	Ala	Asn
225					230				235						240
Pro	Ile	Ile	Cys	Leu	Phe	Val	Gly	Ser	Ile	Lys	His	Cys	Gln	Phe	Gln
			245					250					255		
Cys	Gly	Thr	Leu	Arg	Leu	Ile	Leu	Gln	Arg	Ala	Ile	Gln	Glu	Ser	Pro
		260						265				270			

Glu

<210> 82
 <211> 1319
 <212> DNA
 <213> Mus musculus

<400> 82

tttataaacc	agggtcagtaa	ttaccacata	gcaggatggt	cctgaatcag	aaagaacata	60
gcatgtgctc	attgttttgt	ttattttgtt	ccagaaatag	tactggagac	ttcctaaaca	120
aggatctaag	catctcaacc	ttggaagcta	actccagaac	atctactgaa	cccaatgata	180
cttcagggttg	tggcatcaag	ttccaaacca	agatgtttgt	ttccctcatt	tccctgtttg	240
ggatggtact	aaatcccata	gtgctgtgat	tgctgagctt	ccagggtgcac	aggaatgcct	300
tgtttgtcta	catcctcaac	cttgctgtgg	ttgacatttt	cttcgggttt	gatcagtttg	360
catttttgtgt	ttttgttata	atttacacta	tcaagtccat	ttccaatgat	atcctatcat	420
tttttatttt	tgtgccagca	tttctgtatc	ttttaagcct	gagcattctc	ataaccatta	480
gcattgaacg	atgcctgtat	gtcatgtggc	ccatctggta	tactgtcaa	tgtccaagac	540
acacatcagc	tgtcatttgt	gtcttgcttt	gggctctgtc	ccttggtgtt	atgtttctgg	600
atgggaaggc	atatttttta	ctgttttctg	accctaactc	tttttggtat	cagacatttg	660
atatcatcat	tactgtatag	acaattgttt	tatttgtggt	tctctgtggg	tccagcttaa	720
tctacttgt	cagaatcttc	tgtggctccc	agcagatccc	tgtaaccagg	ctggatgtga	780
tcattgcact	cagagtgcct	ttcttcctga	tatttagttt	tcccttttgg	atctactggc	840
tccttgacca	acggattggg	agacgttgta	attttttgat	gaaatgattt	tcttatcctg	900
tattaagagc	tgtgtcaact	ccatcattta	ctttcttggt	gcctccatta	tgcacagtag	960
tggattcaag	gtgaagagtc	tcaaactatt	tccagagaga	gccatgcagg	acatttctga	1020
agaaggagaa	ggtgttgaga	atagttctta	aggaaatcat	gaagaactgg	agaaatctag	1080
tgcagcagac	gacagctact	ttgattagac	agagtggctg	tttttcttat	ctttgtggac	1140
taattttaatg	accttattca	gtttgttact	taatcttcaa	tcagttaaaa	atgacaatca	1200
tttttghtaat	agttgaaaga	tacagtactt	gtcacacaaa	tattaactgt	gccatttctc	1260
ttgctgtggt	tttgaggcct	ttaccatttc	cttttgatgg	gagtacttgc	aagtatttct	1319

<210> 83
 <211> 264

<212> PRT
<213> Mus musculus

<400> 83

Leu	Ile	Ser	Leu	Phe	Gly	Met	Val	Leu	Asn	Pro	Ile	Val	Leu	Leu	Leu	
1				5					10					15		
Ser	Phe	Gln	Val	His	Arg	Asn	Ala	Leu	Phe	Val	Tyr	Ile	Leu	Asn	Leu	
			20					25					30			
Ala	Val	Val	Asp	Ile	Phe	Phe	Arg	Phe	Asp	Gln	Phe	Ala	Phe	Cys	Val	
		35					40					45				
Phe	Val	Ile	Ile	Tyr	Thr	Ile	Lys	Ser	Ile	Ser	Asn	Asp	Ile	Leu	Ser	
	50					55					60					
Phe	Phe	Ile	Phe	Val	Pro	Ala	Phe	Leu	Tyr	Leu	Leu	Ser	Leu	Ser	Ile	
65					70				75						80	
Leu	Ile	Thr	Ile	Ser	Ile	Glu	Arg	Cys	Leu	Tyr	Val	Met	Trp	Pro	Ile	
				85				90						95		
Trp	Tyr	His	Cys	Gln	Cys	Pro	Arg	His	Thr	Ser	Ala	Val	Ile	Cys	Val	
			100					105					110			
Leu	Leu	Trp	Ala	Leu	Ser	Leu	Val	Phe	Met	Phe	Leu	Asp	Gly	Lys	Ala	
		115					120					125				
Tyr	Phe	Leu	Leu	Phe	Ser	Asp	Pro	Asn	Ser	Phe	Trp	Tyr	Gln	Thr	Phe	
	130					135					140					
Asp	Ile	Ile	Ile	Thr	Val	Thr	Ile	Val	Leu	Phe	Val	Val	Leu	Cys	Gly	
145					150				155						160	
Ser	Ser	Leu	Ile	Leu	Leu	Phe	Arg	Ile	Phe	Cys	Gly	Ser	Gln	Gln	Ile	
				165				170						175		
Pro	Val	Thr	Arg	Leu	Asp	Val	Ile	Ile	Ala	Leu	Arg	Val	Leu	Phe	Phe	
			180					185					190			
Leu	Ile	Phe	Ser	Phe	Pro	Phe	Trp	Ile	Tyr	Trp	Leu	Leu	Asp	Gln	Arg	
		195					200					205				
Ile	Gly	Arg	Arg	Cys	Asn	Phe	Leu	Asn	Glu	Met	Ile	Phe	Leu	Ser	Cys	
	210					215					220					
Ile	Lys	Ser	Cys	Val	Asn	Ser	Ile	Ile	Tyr	Phe	Leu	Val	Ala	Ser	Ile	
225					230				235						240	
Met	His	Ser	Ser	Gly	Phe	Lys	Val	Lys	Ser	Leu	Lys	Leu	Phe	Pro	Glu	
				245				250						255		
Arg	Ala	Met	Gln	Asp	Thr	Pro	Glu									
			260													

<210> 84
<211> 2349
<212> DNA
<213> Mus musculus

<400> 84

tttctttctg	agaaatagtt	tgtttttaaaa	taggaatttt	aaaacagctt	gagacactga	60
gagttttatac	tggaaccatc	aactactcta	atgtcaatac	aggatatggg	ttgtagataa	120
cccaaataata	tatgaatgat	atatttaaat	taaggctcca	gaaatattga	ttttgataaa	180
ttgcttcatg	tctaccaccc	tgtttcacca	ttttaagaac	taggtaaacc	gttaacatct	240
ataatggtga	tcctaagaat	cagagaacaa	aaagcatgtg	ttcatgtctt	gtttttcttt	300
ccagaaacat	cagtgggaag	gatctaagag	tggattcaaa	cataacatac	tggggaacaa	360
acatcacagc	tgtgaatgaa	agcaaccaya	ctggaatgtc	attttgtgaa	gtcgtgtctt	420
gtaccatgkt	ttttctttcc	ctcattgttg	ccctagttgg	gctggttgga	aatgccacag	480
tgctgtggtt	cctgggcttc	cagatgcgca	ggaatgcatt	ctctgtttac	atcctcaacc	540
tcgctggtgc	tgactttctc	ttcatttgct	ttcaaattgg	atattgtttt	cacatgatct	600
tggacattga	ttccatcccc	attgaaattg	atctgtttta	ccttgttgtg	ttaaactttc	660

```

cttatttttg tggcctgagt atcctcagtg ctattagcat tgaacgttgc ctgtctgtca 720
tgtggcccat ttggtatcac tgccaacgcc caaggcacac atcagctgtc atatgtaccc 780
tgctttgggt cttgtcccta gtgtgtagcc tcctggaagg gaaggaatgt ggcttcctat 840
attacactag tgaccctggg ttggtgtaaga catttgattt aatcactgct acatgggttaa 900
ttgttttatt tgtagctctc ttgggatcca gtctggcctt agtgattacc atcttctggg 960
gcttacacaa gattcctgtg accaggctgt atgtggccat tgtgttcaca gtgcttgttt 1020
tcctgctctt tggctctgcc tatgggatct actggttcct cttagtgtgg attgagaaat 1080
tttattatgt tttaccttgt agtatatatc cggtcacagt atttctctcc tgtgttaaca 1140
gctctgcaaa acccatcatt tattgccttg taggctccat taggcctcat cgatttcaac 1200
ggaagactct caagctatct ctgcagagag ccatgcaaga cactcctgag gaggaagaat 1260
gtggagagat gggttcctca ggaagatcta gagaaataaa aacaatctgg aaaggactga 1320
gagctgcttt gatcaggcat aaagagctct gaagagaact atgtttttat cactttgttg 1380
cattttcata acgttggtta gttgatgacc caaggttaac tcagttggga aagtagtcaa 1440
tggtgtagaa gttgattgat attggacttg ttacaaatac tgggtacaac atttctgcag 1500
ctatcttgct cagggtttta ccaacttctt ttgatgttac tccttgcaag ctctgtgggg 1560
tccaggaaag ctggtgacca caattgataa atcccttctt cagaagaaag cttagaaag 1620
tacaggaaag ggttgcatct cttactcac ttaacttgat agtggataaa ttcattgttat 1680
atthtgcaaa aaaattattc tgtttcaagg caaacttttc ttcagtgttg aagggttaaa 1740
tagatacatt atataatccc agactttatt aatttctgta tgttttaaa aatatgtgga 1800
gcaatagttt ttcttataca catttcttaa taaagaagta aacattctca agagaagtgt 1860
taaacatcca tgtacatagg aagggtgcagt gtctctgtg gttctattca cagtttctt 1920
tttagcatcc catagttgag tattgtcttt gatatgatcc tcatgctctc tgactgtgta 1980
atccctcatg aaaagtttcc aatgaggtcc tctataaaga ctcccttgaa atacaactta 2040
ttttaaattt ataccatttc aaggagccca cagcatctat taacttagct atatgcacag 2100
tttagtaaaa ttttctataa aataatattc cttttataaa gctgcagtaa taatttcaat 2160
ttttctacaa ttaagagaat aaaatatcaa caaattaaat aaaactaatc agtaggtttt 2220
cttaagttaa tgtagctgca tgactctgta cctaatacaag acacaaaata ctacactata 2280
tcttttaatt ttcatttctt ctctgtcat aattttatat cacagataaa tatgatatcc 2340
atacttctg 2349

```

<210> 85

<211> 273

<212> PRT

<213> Mus musculus

<400> 85

```

Phe Leu Ser Leu Ile Val Ala Leu Val Gly Leu Val Gly Asn Ala Thr
1           5           10           15
Val Leu Trp Phe Leu Gly Phe Gln Met Arg Arg Asn Ala Phe Ser Val
20          25          30
Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Leu Phe Ile Cys Phe Gln
35          40          45
Ile Gly Tyr Cys Phe His Met Ile Leu Asp Ile Asp Ser Ile Pro Ile
50          55          60
Glu Ile Asp Leu Phe Tyr Leu Val Val Leu Asn Phe Pro Tyr Phe Cys
65          70          75          80
Gly Leu Ser Ile Leu Ser Ala Ile Ser Ile Glu Arg Cys Leu Ser Val
85          90          95
Met Trp Pro Ile Trp Tyr His Cys Gln Arg Pro Arg His Thr Ser Ala
100         105         110
Val Ile Cys Thr Leu Leu Trp Val Leu Ser Leu Val Cys Ser Leu Leu
115         120         125
Glu Gly Lys Glu Cys Gly Phe Leu Tyr Tyr Thr Ser Asp Pro Gly Trp
130         135         140
Cys Lys Thr Phe Asp Leu Ile Thr Ala Thr Trp Leu Ile Val Leu Phe
145         150         155         160
Val Ala Leu Leu Gly Ser Ser Leu Ala Leu Val Ile Thr Ile Phe Trp

```

				165					170					175					
Gly	Leu	His	Lys	Ile	Pro	Val	Thr	Arg	Leu	Tyr	Val	Ala	Ile	Val	Phe				
			180					185					190						
Thr	Val	Leu	Val	Phe	Leu	Leu	Phe	Gly	Leu	Pro	Tyr	Gly	Ile	Tyr	Trp				
		195					200					205							
Phe	Leu	Leu	Val	Trp	Ile	Glu	Lys	Phe	Tyr	Tyr	Val	Leu	Pro	Cys	Ser				
	210					215					220								
Ile	Tyr	Pro	Val	Thr	Val	Phe	Leu	Ser	Cys	Val	Asn	Ser	Ser	Ala	Lys				
225					230					235					240				
Pro	Ile	Ile	Tyr	Cys	Leu	Val	Gly	Ser	Ile	Arg	His	His	Arg	Phe	Gln				
			245					250					255						
Arg	Lys	Thr	Leu	Lys	Leu	Phe	Leu	Gln	Arg	Ala	Met	Gln	Asp	Thr	Pro				
		260						265					270						
Glu																			

<210> 86
 <211> 1313
 <212> DNA
 <213> Mus musculus

<400> 86
 tttatttaaat tatttttgta ttgttggttc aggtagcaag tatttcctaa gcatgggata 60
 tagacatttc gagcctgggc atttacatca tagcaccgaa tggaagcagc tacactaata 120
 gtgttgattg tttcttcaaa atccaagtca tgggttttct ttccctcatc atttcccctg 180
 ttgggatggg attaaattcc acagtgcgtg ggtttctggg cttccagata cgtaggaatg 240
 ccttctctgt ctacatcctc aacctggcgc gggctgactt tctcttcctg cactctcagt 300
 ttttatttta ccttcttgct atttttccct ccattcctat ccagatccct ctcttttttg 360
 atatgttgac aaaatttgca tatctttctg ggctgagcat tctcagcacc attagcattg 420
 agcgctgcct gtgtgtcatg tggcccatct ggtaccgctg tcaaagacca agacacacat 480
 catctgtaac ctgttccttg ctttgggctt tgtccctggt gtttgctctt ctggatggga 540
 tgggatgtgg cttactgttt aatagttttg accagtcttg gtgtttgaaa tttgatttaa 600
 tcatttggtg gtggtcaatt gttttatttg tgggtctctg tgggtccagt ctcatcctac 660
 ttgttaggat cttctgtggc tcccagcaga tccctgtgac caggctgtat gtgaccattg 720
 cactcacagt gttattcttc ctaatctgct gtcttccctt tggaatctcc tggatcatcc 780
 aatggagtga aactttgata tatgttggat tttgtgatta ttttcacgag gaactattcc 840
 tatcctgtat taacagctgt gccaacctta tcatttactt ccttggttgg tttattcgtc 900
 agcgaaagt ccaacagaag tctctgaagg tgcttcttca aagagcgatg gaggacactc 960
 ctgaagaaga aaatgaagac atgggtcctt caagaaatcc agaagaattt gaaacagtct 1020
 gtagcaactg agaggttctt tgatcagaca gaaatggttt tttagagaaa aaaatttttt 1080
 ctcattttctg tgggccattt tcacagtttt ,gyacagtttg tttcctgata ttcaatcagt 1140
 taaaaaataa gcatttttgt gaaagtggat agatacaaga cttgtcatac aaatactgac 1200
 tgtagtattt ttggagctgt tactcagact ttcatcatct ccttttgatg ggattccatg 1260
 taagtgtctg gagttgagga gatgtgttga ccactattga caaagccctc att 1313

<210> 87
 <211> 270
 <212> PRT
 <213> Mus musculus

<400> 87
 Phe Leu Ser Leu Ile Ile Ser Pro Val Gly Met Val Leu Asn Ser Thr
 1 5 10 15
 Val Leu Trp Phe Leu Gly Phe Gln Ile Arg Arg Asn Ala Phe Ser Val
 20 25 30
 Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Leu Phe Leu His Ser Gln

	35					40					45				
Phe	Leu	Phe	Tyr	Leu	Leu	Ala	Ile	Phe	Pro	Ser	Ile	Pro	Ile	Gln	Ile
50						55					60				
Pro	Leu	Phe	Phe	Asp	Met	Leu	Thr	Lys	Phe	Ala	Tyr	Leu	Ser	Gly	Leu
65					70					75				80	
Ser	Ile	Leu	Ser	Thr	Ile	Ser	Ile	Glu	Arg	Cys	Leu	Cys	Val	Met	Trp
				85					90					95	
Pro	Ile	Trp	Tyr	Arg	Cys	Gln	Arg	Pro	Arg	His	Thr	Ser	Ser	Val	Thr
			100					105					110		
Cys	Ser	Leu	Leu	Trp	Ala	Leu	Ser	Leu	Leu	Phe	Ala	Leu	Leu	Asp	Gly
		115					120					125			
Met	Gly	Cys	Gly	Leu	Leu	Phe	Asn	Ser	Phe	Asp	Gln	Ser	Trp	Cys	Leu
130						135					140				
Lys	Phe	Asp	Leu	Ile	Ile	Cys	Ala	Trp	Ser	Ile	Val	Leu	Phe	Val	Val
145				150					155					160	
Leu	Cys	Gly	Ser	Ser	Leu	Ile	Leu	Leu	Val	Arg	Ile	Phe	Cys	Gly	Ser
				165					170					175	
Gln	Gln	Ile	Pro	Val	Thr	Arg	Leu	Tyr	Val	Thr	Ile	Ala	Leu	Thr	Val
			180					185					190		
Leu	Phe	Phe	Leu	Ile	Cys	Cys	Leu	Pro	Phe	Gly	Ile	Ser	Trp	Ile	Ile
		195					200					205			
Gln	Trp	Ser	Glu	Thr	Leu	Ile	Tyr	Val	Gly	Phe	Cys	Asp	Tyr	Phe	His
210					215						220				
Glu	Glu	Leu	Phe	Leu	Ser	Cys	Ile	Asn	Ser	Cys	Ala	Asn	Pro	Ile	Ile
225					230					235				240	
Tyr	Phe	Leu	Val	Gly	Phe	Ile	Arg	Gln	Arg	Lys	Phe	Gln	Gln	Lys	Ser
				245					250					255	
Leu	Lys	Val	Leu	Leu	Gln	Arg	Ala	Met	Glu	Asp	Thr	Pro	Glu		
			260					265					270		

<210> 88
 <211> 1883
 <212> DNA
 <213> Mus musculus

<400> 88
 cgtgtgccac caccaccaac aggtgggaca tttcttaaag tatactattc atttaatctt 60
 tatcaagttt aattaccaa gcaattctga cacttcttgc actaccttga tccttttctt 120
 gagggaggca tttgttccca gtgagagctg ttctgacccc aagagattac aagggttaca 180
 tcacaagggg gtgcagtaag gcatacataa ggcagtttga tgggtgctgca gtgaatttct 240
 gagtaacaag ctccatttct cctaatttga ataaaatgac tattttctct accaattaaa 300
 caagattgtg aaaactgcct acatagataa aagcaaaatt gactctcaga gaaactatgt 360
 ctcatcaagt actctttcaa agcctgcact agactcttcc cagttcccta gcctttgtga 420
 aggacccttc tctcctctct tttcctcact actgtcctac atggttctct gcagaagttg 480
 cttcaaactc tgacattgca acctacgggtg cctaacagag ccaaggagag agtaaataat 540
 gggattggca cagctgttaa cacaggaatg ctatcacttc aaaaacattg tatgagaaca 600
 tgctatgtaa gtccataaac attgtcaaga ggaatgtgca gattccaatg ggcataccaa 660
 agaatatgaa gaccatcaat gtgagggcaa tggacacata gaacatgggtc acaggaatcc 720
 tgagtgtatc acagaacatt tgacaaacag ggccaggcta gacacaaaak aaaccacaga 780
 taatactatt atcaatgcag tagygatata gtggcatrta atacagaaat tgtgttcwta 840
 ataacttaac agaaagccac agccttgttc aaasrgaagg atcarcagta tagagaaaac 900
 ccagagcaga gcacacatga cagctgatgt gtgtcttggc cttcagcagt gataccagat 960
 gggacacata acagataggc agtgctcagc actgattgtt gmaatcatac acaaacctgc 1020
 aagttaagca atcataaatc ctgtgaggat aaaatgatag tagatcataa gtatcttaag 1080
 gaaacactgc aggggaatgt acaaactgtg tgcaaatttg caagaaatca gcacaagaca 1140
 ggtttaagac atagacagag aaggcattcc tatgcagggtg gaaggctaga agccatagca 1200

```

ctatggcatt tcctgccagg ccaagcacag caatgatgac aataagaaaa ttgaatgtgg 1260
tgaacacagga taaatTTTTc agtgcattaa cttccattga cttctgtgtt tttaaatttc 1320
cattccagggt tgggtggatc catgcttagg aattttccac tggcattcct gcaaagaaat 1380
agagatatga atctagggtg ctctttgtag ggactatgtg actatgtagg aatgtatggc 1440
acaggtacat aaggagggag aaacaggatc acagagatta agtaatttac caacattcca 1500
aaagtgtctac acatttttga aatccatttt gtactattca gtctaactgc agaccagtat 1560
gatgtaaggt agttgatggg cccagtacag ttgctaggca tttatttcag gttatgtgag 1620
gaagagacag aactctgaaa ccaacattct ttttgttcta gggctgagat ttcttctctg 1680
gtgtaggaaa atggaagttc ttggtgcaag ccatatcttc cctcagtcac tgggaggaat 1740
ctatcaaaca ggcaaaatag aatcatgaat gagagtcatg aatgagattc acgaagggaa 1800
tggtagcttgc tatgaagacc tgtaggggaa tagccatgct tcttatgctt gaaagggtag 1860
ttgctcattt aacaatttta aaa 1883

```

<210> 89

<211> 263

<212> PRT

<213> Mus musculus

<400> 89

```

Phe Leu Ile Val Ile Ile Ala Val Leu Gly Leu Ala Gly Asn Ala Ile
1      5      10      15
Val Leu Trp Leu Leu Ala Phe His Leu His Arg Asn Ala Phe Ser Val
20     25     30
Tyr Val Leu Asn Leu Ser Cys Ala Asp Phe Leu Gln Ile Cys Thr Gln
35     40     45
Phe Val His Ser Pro Ala Val Phe Leu Lys Ile Leu Met Ile Tyr Tyr
50     55     60
His Phe Ile Leu Thr Gly Phe Met Ile Ala Leu Ala Gly Leu Cys Met
65     70     75     80
Ile Ser Thr Ile Ser Ala Glu His Cys Leu Ser Val Met Trp Pro Ile
85     90     95
Trp Tyr His Cys Arg Pro Arg His Thr Ser Ala Val Met Cys Ala Leu
100    105    110
Leu Trp Val Phe Ser Ile Leu Leu Ile Leu Leu Phe Val Gln Gly Cys
115    120    125
Gly Phe Leu Leu Ser Tyr Tyr Glu His Asn Phe Cys Ile Ile Cys His
130    135    140
Tyr Ile Ala Thr Ala Leu Ile Ile Val Leu Ser Val Val Ser Phe Val
145    150    155    160
Ser Ser Leu Ala Leu Phe Val Thr Met Phe Cys Val Ser Leu Arg Ile
165    170    175
Pro Val Thr Met Phe Tyr Val Ser Ile Ala Leu Thr Leu Met Val Phe
180    185    190
Ile Phe Phe Gly Met Pro Ile Gly Ile Cys Thr Phe Leu Leu Thr Met
195    200    205
Phe Met Asp Leu His Ser Ser Ser His Thr Met Phe Leu Lys His Ser
210    215    220
Cys Val Asn Ser Cys Ala Asn Pro Ile Ile Tyr Ser Leu Leu Gly Ser
225    230    235    240
Val Arg His Arg Arg Leu Gln Cys Gln Ser Leu Lys Gln Leu Leu Gln
245    250    255
Arg Thr Met Asp Ser Ser Glu
260

```

<210> 90

<211> 1219

<212> DNA
<213> Mus musculus

<400> 90
ttataaatga ttttattaag ccatattgac aataatatct atattatatg atgattgcc 60
gaagaagggt aaatgttaag gtgatcaa atggtctgtg ttctcagaga caccactgga 120
agatttgtga gcatggatcc aaccatctca tcccacaaca cagaatctac accactgaat 180
gaaactgggtc attccaaatg cagtccaatc ctgactctgt cctttctggt cctcatcact 240
gtcctgggtgg aactaggagg aagcaccatt gtactctggc tcttggaatt cagcatgccc 300
aggaaagcca tctcagtcta tgtcctcaat ctggctctgg cagactcctt ctctctgggc 360
tgcgatttca ttgaatttct gctacggatc attgacttca tctatgcccc taaattaagc 420
aaagatatct taggcaatac agcaatcatt ccttatatcg caggacagaa cgttctcagt 480
gctattagca tggagcactg cctgtctgta ttgtggccaa tctggtagca ctaccaccac 540
ccaagaaaca tgtcagctat catatgtgcc ctaatctggg ttctgtactt tctcatgggc 600
atcctccatt ggttcttctc agtattcctg ggtgaggctc atcatcattt gaggaaaaag 660
gttgacttta ctataactgc atttctgaat ttttatttat gcttactctt gtgtccagtc 720
tggccctact gctgaggatc ctctgtggct ccaggaggaa acccctgtcc aggctgtatg 780
ttaccatcgc tctcacagtg atggtcacct catctctggc ctgcctcttg ggctttactt 840
gttctctgta tactggtttg gggttcattt gcatcatccc tcttgtcaca attaccaagt 900
tacttcagtc ctgcctctgt taaacagcta taacaacccc atcatttact tcattgtagg 960
ctccttttagg cctcttagaa agcattaatc cctccaaact attcttaaga gggctctgga 1020
ggacactcct gaggagcatg aatatacagc cagccatctt cagaaaacca ctgagatgtc 1080
agaaagcatt tttgagagtc aaaacaacat taacttaatc ttctctcaga aaccctcag 1140
tgattgcact gctttcaatt gattattttt tatccaattt tcttatactt ctcaaagtag 1200
tcataaataa gaatttctc 1219

<210> 91
<211> 270
<212> PRT
<213> Mus musculus

<400> 91
Phe Leu Val Leu Ile Thr Val Leu Val Glu Leu Gly Gly Ser Thr Ile
1 5 10 15
Val Leu Trp Leu Leu Glu Phe Ser Met Pro Arg Lys Ala Ile Ser Val
20 25 30
Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Gly Cys Asp
35 40 45
Phe Ile Glu Phe Leu Leu Arg Ile Ile Asp Phe Ile Tyr Ala His Lys
50 55 60
Leu Ser Lys Asp Ile Leu Gly Asn Thr Ala Ile Ile Pro Tyr Ile Ala
65 70 75 80
Gly Gln Asn Val Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val
85 90 95
Leu Trp Pro Ile Trp Tyr His Tyr His His Pro Arg Asn Met Ser Ala
100 105 110
Ile Ile Cys Ala Leu Ile Trp Val Leu Tyr Phe Leu Met Gly Ile Leu
115 120 125
His Trp Phe Phe Ser Val Phe Leu Gly Glu Ala His His His Leu Arg
130 135 140
Lys Lys Val Asp Phe Thr Ile Thr Ala Phe Leu Ile Phe Leu Phe Met
145 150 155 160
Leu His Ser Val Ser Ser Leu Ala Leu Leu Leu Arg Ile Leu Cys Gly
165 170 175
Ser Arg Arg Lys Pro Leu Ser Arg Leu Tyr Val Thr Ile Ala Leu Thr
180 185 190
Val Met Val Tyr Leu Ile Ser Gly Leu Pro Leu Gly Leu Tyr Leu Phe

	195					200					205								
Leu	Leu	Tyr	Trp	Phe	Gly	Val	His	Leu	His	His	Pro	Ser	Cys	His	Asn				
	210					215					220								
Tyr	Gln	Val	Thr	Ser	Val	Leu	Pro	Cys	Val	Asn	Ser	Tyr	Asn	Asn	Pro				
225					230					235					240				
Ile	Ile	Tyr	Phe	Ile	Val	Gly	Ser	Phe	Arg	Pro	Leu	Arg	Lys	His	Ser				
				245					250					255					
Leu	Gln	Thr	Ile	Leu	Lys	Arg	Ala	Leu	Glu	Asp	Thr	Pro	Glu						
		260						265					270						

<210> 92
 <211> 1178
 <212> DNA
 <213> Mus musculus

<400> 92

ttaaggtgat	gaaatatggt	ctgtgttctc	aggacacca	ctggaagatt	tgtgagcatg	60
gatccaatca	tctcatccca	caacagagaa	tcacaccact	gaatgaaact	gcaatcattc	120
caactgcagt	ccaatcctga	ctctgtcctt	tctggctctc	atcactatcc	tgggtggaact	180
ggcaggaaac	accattgtcc	tctggctctt	gggattccgc	atgcacagga	aagccatctc	240
agtttatgtc	ctcaatctgg	ctctggcaga	ctccgtattc	ctctgctgtc	atttcattga	300
ctctctgcta	tgcattcattg	acttcatcta	tgcccataaa	ttaagcagat	accttaggca	360
atgcagaaat	cattccctat	atcacagggc	tgagcatcct	cagtgtctatt	agcatggagg	420
actacctgtc	tgtattgtgg	ccaatctggt	accactgcc	tcaccaagg	aacatgtcaa	480
ctatcctatg	tgccctaata	tgggttctat	cctttctcat	gggcatcctc	gattggttct	540
tctcaggatt	cctgggtgag	actcatcatt	atttgtgaaa	aaatgttgac	tttattataa	600
ctgcatttct	gatttttttt	tttatttatg	cttctctctg	gggtccagtct	ggccctactg	660
ctgaggatcc	tctgtggctc	caggaggaaa	ccactgtcca	ggttgtatgc	taccatctca	720
ctcacagtga	tgggtctacct	catctgtggc	ctacctcttg	ggctttactt	gtttctgtta	780
cactcctttg	gggttaattt	gcatcatccc	ttttgtcacc	tttacaaagt	tactgcagtc	840
ctgtcctgtg	taaacatctc	taccaacccc	atcaatcatt	taattcattg	gcatttcttt	900
tttttttaat	taggtatttt	cctcgtttac	attttcaatg	ctatcccaaa	gggtccccc	960
accaccccc	cccaatccct	accacccac	tgcccctttt	tggcactggc	gttcccctgt	1020
actggggcat	ataaagtttg	caagtccaat	gggcctctct	ttgcagtgat	gaccgactag	1080
gccatctttt	gatacatatg	cagctaaaga	catgagctcc	cgggtactgg	ttagttcata	1140
ttgttgttcc	acctataggg	ttgcagttcc	ctttagct			1178

<210> 93
 <211> 243
 <212> PRT
 <213> Mus musculus

<400> 93

Phe	Leu	Val	Leu	Ile	Thr	Ile	Leu	Val	Glu	Leu	Ala	Gly	Asn	Thr	Ile
1				5					10					15	
Val	Leu	Trp	Leu	Leu	Gly	Phe	Arg	Met	His	Arg	Lys	Ala	Ile	Ser	Val
		20						25					30		
Tyr	Val	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Ser	Val	Phe	Leu	Cys	Cys	His
		35					40					45			
Phe	Ile	Asp	Ser	Leu	Leu	Cys	Ile	Ile	Asp	Phe	Tyr	Leu	Cys	Pro	Asp
	50					55					60				
Ala	Asp	Thr	Leu	Gly	Asn	Ala	Glu	Ile	Ile	Pro	Tyr	Ile	Thr	Gly	Leu
65					70					75				80	
Ser	Ile	Leu	Ser	Ala	Ile	Ser	Met	Glu	Asp	Tyr	Leu	Ser	Val	Leu	Trp
			85					90					95		
Pro	Ile	Trp	Tyr	His	Cys	His	His	Pro	Arg	Asn	Met	Ser	Thr	Ile	Leu


```

gcgtggaaat ggttccattc tctcatggac aaggttggat ccatttcctg ctctcctgta 1860
accccagaaa gggaagcacc agatttgcct ccccagggct taaaataaca caggaaagat 1920
gaagatatca gggatttgtc gaggtacatt aagggaataa tccttctgca tgggtcaaaag 1980
aatgtattct gagttatgca cctaactctc ggtcgagaca tgacactggt ctgtgcaaca 2040
gattacagat cacatgcatt tacctcctcc cttgagatga ccaagctgca cctatcagtc 2100
acttcaccag gggattgctg aggtggcaga aggaatgaca actcactcat ctttcacagg 2160
agttatacct tctctgcagc catctctgac cttccctcag ctggtacagt taagcctgtc 2220
tgcttttctg aaagcactta aggttccttt ttctttcttt agatctcctt ttcttttgaa 2280
catgggtcaa aagaccaagc aacattttcc tgagagtctg gactctctca atcatttctg 2340
aaaccacat ctctttccac catgaaagtt ttttcccaac ttccattgct ggacatacca 2400
gctttcttgg ggatgt                                     2416

```

<210> 95

<211> 269

<212> PRT

<213> Mus musculus

<400> 95

```

Phe Leu Val Leu Ile Thr Val Leu Val Glu Leu Ala Gly Asn Thr Ile
1          5          10          15
Val Leu Trp Leu Leu Gly Phe Met His Arg Lys Pro Ile Ser Gly Tyr
20          25          30
Val Leu Asn Leu Ala Leu Gly Asp Ser Phe Phe Leu Cys Cys His Phe
35          40          45
Ile Asp Ser Leu Leu Trp Ile Ile Asp Phe Ile Tyr Ala His Lys Leu
50          55          60
Asn Lys Asp Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Met Ala Gly
65          70          75          80
His Ser Leu Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val Leu
85          90          95
Trp Pro Ile Trp Tyr Asp Phe His His Gln Ser Asn Met Ser Ala Ile
100         105         110
Leu Tyr Ala Leu Ile Trp Val Leu Ser Ile Leu Ile Gly Ile Leu Asp
115         120         125
Trp Phe Phe Leu Gly Phe Leu Gly Glu Thr Asn His His Leu Cys Glu
130         135         140
Asn Val Ala Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu
145         150         155         160
Leu Ser Val Ser Ser Leu Ala Leu Leu Leu Arg Ile Leu Cys Gly Pro
165         170         175
Arg Lys Lys Pro Leu Ser Arg Leu Val Thr Ile Ser Leu Thr Val Met
180         185         190
Val Tyr Leu Ile Cys Gly Leu Pro Leu Gly Leu Tyr Phe Phe Leu Leu
195         200         205
His Trp Phe Gly Val His Leu His Tyr Pro Ser Cys His Ile Tyr Gln
210         215         220
Val Thr Ala Val Leu Ser Cys Val Asn Ser Ser Ala Asn Pro Ile Ile
225         230         235         240
Tyr Phe Ile Val Gly Ser Phe Arg His Cys Arg Lys Cys Cys Ser Phe
245         250         255
Gln Thr Ile Leu Asn Arg Ala Leu Lys Asp Thr Pro Glu
260         265

```

<210> 96

<211> 1954

<212> DNA

<213> Mus musculus

<400> 96

```
tggcattcgg tacctgcctc ctggcagaag atgaaggccc gaaatagggc atgtcccagt 60
aagctgttag cttctgtatt ccaaactctc acctacacag actagtctca gagggatcgg 120
ggaaccaaga tggcttcccc atggtactcc agcaaaacac tcccaggtga ggtggacacc 180
tctcctctga caggggaagg gcccggatat ctggagcctg aaacgggggc tgcctcagaa 240
gctgttagct tctgtagtcc acactctcac atgtgtaggc tagtctcagc aggatccagg 300
aaccaagatc agaaggggtca atgttcagggt gatcaaagt agtctgtgtt cacagggata 360
ccactggaag atttgtgagc atggatccaa tcatctcatc ccacaacaca gaatcacacc 420
actgaatgaa actggtcatc ccaactgcag tacaatcctg actccatcct ttctggtcct 480
catcactgtc ctggtggaac tggcaggaaa taccattgta ctctggctcc tgagattcca 540
catgcacagg atagcccatc tcagactatg tcctcaatct ggctctggca gattccttct 600
tcctctcctg ccagttcatt gactctctgc tatggatcct tgacttcatc tagggccata 660
aattaagcaa agatatctta tggaatgcag caatcattcc caataatgca gggctgagct 720
acctcagtgc tattagcatg gagcactgcc tgcctgtatt gtggccaatc tggcaccact 780
gccaccacac aagaacatg tcagctatca tatgtgccct aatctgggtt ctgtcctttc 840
tcatgggcat cctcgattag tactttctcag gattcctggg tgagactcat catcagttgt 900
ggaaaaatgt tgattttatt ctaactgcat ttctgatttc tttttttttt tatttatgct 960
tctctctggg tccagtctgg ccctacgact gaggatcctc tgtggctcca ggaggaaacc 1020
cctgtccttg ctgtatgtta tcatctctct cacagtgatg gtctacctca tctgtggcct 1080
acctgttggg ctttacttgt tcctgttaaa ctggtttggg gttcatttgc atcatcccat 1140
ttgtcacatt tatcaagtta ctgcactcct gccctttgta aacagctttg ccaaaccat 1200
catttccttc attgtaggct cctttaggca ttgtagaaag cattgggtcc gccaaactat 1260
tattaagagg gctctggagg acactcctga ggaggatgaa tatacagata gccatcttca 1320
gaaaactact gagatgtcag aaagcagatg ttgagagtca agacaacatt aacttaatct 1380
tctctcagaa acacctcact gggtgcagtg ctttcaattg attatttttt aatccaattt 1440
tcttataagt ctcaaagtag tcataaataa gaatttctcc aacattcttg gccttgtcaa 1500
tgaattttctc aaatatcctc caaaacattt tgtatataat ttaatttttt tagatatatt 1560
ctatatattat atttccaatg ttatccccct yccttagttt cccctccaaa agccccctct 1620
ccccctcccc cccccactgc tcctcaatat actcactccc ataattgaac acctttttgc 1680
acttttttct tttttttcac tttttgtttt ttattagata ttttctttat ttacatttca 1740
aatgttgtcc cttttcctga ttttcctct gaaaacccat tactgtcatc cccctgtaca 1800
ccatccctcc cacttctact tctatcctag gcattcccct acactggggt atagggcctt 1860
cacaggacca agagtctctc ctcccattga tgagctacaa ggccatcctc tgctacacat 1920
ggcaactgga gccatgggtc cctccatgty tact 1954
```

<210> 97

<211> 272

<212> PRT

<213> Mus musculus

<400> 97

```
Phe Leu Val Leu Ile Thr Val Leu Val Glu Leu Ala Gly Asn Thr Ile
 1           5           10           15
Val Leu Trp Leu Leu Arg Phe His Met His Arg Ile Ala Leu Ser Asp
 20           25           30
Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Ser Cys Gln
 35           40           45
Phe Ile Asp Ser Leu Leu Trp Ile Leu Asp Phe Ile Ala His Lys Leu
 50           55           60
Ser Lys Asp Ile Leu Trp Asn Ala Ala Ile Ile Pro Asn Asn Ala Gly
 65           70           75           80
Leu Ser Tyr Leu Ser Ala Ile Ser Met Glu His Cys Leu Pro Val Leu
 85           90           95
Trp Pro Ile Trp His His Cys His His Thr Arg Asn Met Ser Ala Ile
100           105           110
```

Ile	Cys	Ala	Leu	Ile	Trp	Val	Leu	Ser	Phe	Leu	Met	Gly	Ile	Leu	Asp
	115					120					125				
Tyr	Phe	Ser	Gly	Phe	Leu	Gly	Glu	Thr	His	His	Gln	Leu	Trp	Lys	Asn
	130					135					140				
Val	Asp	Phe	Ile	Leu	Thr	Ala	Phe	Leu	Ile	Val	Phe	Phe	Phe	Leu	Phe
145					150					155					160
Met	Leu	Leu	Ser	Gly	Ser	Ser	Leu	Ala	Leu	Arg	Leu	Arg	Ile	Leu	Cys
			165						170					175	
Gly	Ser	Arg	Arg	Lys	Pro	Leu	Ser	Leu	Leu	Tyr	Val	Ile	Ile	Ser	Leu
			180					185					190		
Thr	Val	Met	Val	Tyr	Leu	Ile	Cys	Gly	Leu	Pro	Val	Gly	Leu	Tyr	Leu
		195					200					205			
Phe	Leu	Leu	Asn	Trp	Phe	Gly	Val	His	Leu	His	His	Pro	Ile	Cys	His
	210					215					220				
Ile	Tyr	Gln	Val	Thr	Ala	Leu	Leu	Pro	Phe	Val	Asn	Ser	Phe	Ala	Lys
225					230					235					240
Pro	Ile	Ile	Ser	Phe	Ile	Val	Gly	Ser	Phe	Arg	His	Cys	Arg	Lys	His
			245						250					255	
Trp	Ser	Arg	Gln	Thr	Ile	Ile	Lys	Arg	Ala	Leu	Glu	Asp	Thr	Pro	Glu
			260					265					270		

<210> 98

<211> 1893

<212> DNA

<213> Mus musculus

<400> 98

ttagcaatcc	cctggccagg	tgactgacag	gtgcagctta	gtcttttctca	agggatgagg	60
taattgcatg	tgatctgtaa	tctgttgcac	agaccagtgt	catgtctcaa	cccagagtta	120
ggtgtataac	tcagaatcca	tttttttgac	catgcagaag	catctttcct	ttaatgtact	180
tcaacaaaac	cctgatatct	tcatcttttc	tgcgttattt	taagccctgg	ggaggcaa	240
atgatgcttc	ccctttctag	gggttacagg	ggagcaggaa	atggatgcag	ccctgaccat	300
gatagtaggg	aatcatttcc	atgtgattta	aaggctcctga	gttatacaca	ggaagaatga	360
cccagactag	agtatgtaca	agctctgaat	ttgaatccaa	atccagaatt	cttgatccac	420
atggtcatgt	tattctcctt	tttttataaa	tgattttatt	aagccatatt	gacaacaata	480
tctatattac	attatgattg	ccagaagaag	ggtcaatgtt	aaggatgata	aatatgggtc	540
gtgttctctc	ggcacaacac	tggaagattt	ttgagcatgg	atccaaccat	ctcattccac	600
aacacagaat	ctacaccact	gaatgaaact	tgtcatccaa	atacagtcca	atcctgactc	660
cgtcctttct	ggtcctcctc	actgtcctgg	tggacctggc	aggaaacacc	attgttctct	720
ggctcctggg	attccgcatg	cacaggaaac	ccatctcagt	ctatgtcctc	aacctggctc	780
tgggcgactc	cttcttctgc	tgccatttca	ttgactctct	gctatggatc	attgacttca	840
tctatgccca	taaattaagc	aaagatatct	taggcaatgt	agcaatcggt	ccctatatcg	900
cagggtctgag	cgtcctcagt	gctattagca	tggagaactg	actgtttata	ttgtggccaa	960
tctggtacca	ctgccaccac	ccaagaaaca	tgtcagctat	cctatgtgcc	ctaactctgg	1020
ttctgttctt	tctcatgggc	atcctcgggt	ggttcttctt	aagatttttg	ggtgaaactc	1080
atcattgact	ttattatacc	tgcatttctg	attttttttt	tatttatgct	tctctctggg	1140
tccattctgg	ccctactgct	gaggatcctc	tatggttcca	ggaggaaatc	cctgtccagg	1200
ttgtatgtta	acatctctct	cacagtgatg	gtctacctca	tctgtggcct	gcctcttgga	1260
ctttacttgg	tcctgttata	ctgctttggg	gttcatttac	atcatccctc	tcctcacatt	1320
taccaagtta	ctgtggtctt	gtcctatgtg	gacagctctg	ccaaccacat	cttttatatt	1380
cttgacaggtt	ccttttaggt	ttgtagaaag	cattggtccc	tccaaactct	tctaaagagg	1440
actctagagg	acactcctgg	ggaggatgaa	tatacagaca	gccatcttca	gaaaaccact	1500
gagatgtcag	aaagcagatg	ttgagagtca	acacattaac	ttactcttct	ctaagaaacg	1560
cctcagtgat	tgcaatgctt	tcaattgggt	tttcttttta	atcaaatttt	cttatacttc	1620
tcaaagtagt	cagaaatgag	aatttctcga	aaattcttgg	cactgtcaat	gaatttttca	1680
aatatcttcc	aaaactttct	tattttattt	tattttattt	ttattagaca	ttttctttat	1740

ttacatttca aatgttatcc cctttactag tttcccoctcc aaaaaagcac tatcccoctca 1800
cccctctacc tgctcccccac attaccact cccataattg aacacttttt tcttttttta 1860
acttattatt tttattagat attttcttta ttt 1893

<210> 99
<211> 262
<212> PRT
<213> Mus musculus

<400> 99
Phe Leu Val Leu Ile Thr Val Leu Val Asp Leu Ala Gly Asn Thr Ile
1 5 10 15
Val Leu Trp Leu Leu Gly Phe Arg Met His Arg Lys Pro Ile Ser Val
20 25 30
Tyr Val Leu Asn Leu Ala Leu Gly Asp Ser Phe Phe Cys Cys His Phe
35 40 45
Ile Asp Ser Leu Leu Trp Ile Ile Asp Phe Ile Tyr Ala His Lys Leu
50 55 60
Ser Lys Asp Ile Leu Gly Asn Val Ala Ile Val Pro Tyr Ile Ala Gly
65 70 75 80
Leu Ser Val Leu Ser Ala Ile Ser Met Glu Asn Leu Phe Ile Leu Trp
85 90 95
Pro Ile Trp Tyr His Cys His His Pro Arg Asn Met Ser Ala Ile Leu
100 105 110
Cys Ala Leu Ile Trp Val Leu Phe Leu Met Gly Ile Leu Gly Gly
115 120 125
Ser Ser Asp Phe Trp Val Lys Leu Ile Ile Asp Phe Ile Ile Pro Ala
130 135 140
Phe Leu Ile Phe Phe Leu Phe Met Leu Leu Ser Gly Ser Ile Leu Ala
145 150 155 160
Leu Leu Leu Arg Ile Leu Tyr Gly Ser Arg Arg Lys Ser Leu Ser Arg
165 170 175
Leu Tyr Val Asn Ile Ser Leu Thr Val Met Val Tyr Leu Ile Cys Gly
180 185 190
Leu Pro Leu Gly Leu Tyr Leu Val Leu Leu Tyr Cys Phe Gly Val His
195 200 205
Leu His His Pro Ser Pro His Ile Tyr Gln Val Thr Val Val Leu Ser
210 215 220
Tyr Val Asp Ser Ser Ala Asn His Ile Phe Tyr Phe Leu Ala Gly Ser
225 230 235 240
Phe Arg Tyr Cys Arg Lys His Trp Ser Leu Gln Thr Leu Leu Lys Arg
245 250 255
Thr Leu Glu Asp Thr Pro
260

<210> 100
<211> 1290
<212> DNA
<213> Mus musculus

<400> 100
cctctggcta ggtgactgac aggtgcagct tggatcatctc aagggaggag gttactgcat 60
ttgatctata atctgttgca cagaccagtg tcttgtctcg acccagagtt aggtgtataa 120
ctcagaatcc attcttttga ccgtgcaaaa gtatctttct cttgatgtac ctcaacaaaa 180
ccctgatatc ttcatttttc ctgtgttatt ttaagccctg ggggagtaca aatctgatgc 240
ttccctttct gtggttacag gtagagcagg aaatggatcc taccctgacc atgagagaag 300

```

ggaatcattt ccatgtgatt aaaaggtcct gagttataca ctggaagtat gacccagact 360
acagagtata cacaagctct gaatttgaat ccacagtcca gaattcttga tcaatgtagt 420
catgttactc tccttttttt tataaatgat ttttagcaagc catattgaca acaatatcta 480
tattacatta tgatcgccag aagaaaggtc aatgttaagg tgatcaaaca tgggtcttgtt 540
ctcagggaca ccactggaag atttgtgcgc atggatccaa tcattcttate ccacaacaca 600
gaatcacact gctgaatgaa actggtcaac ccaacttcag tccaatcctg actctgtctc 660
tctggtcctc atcactgtcc tgtttgaact ggcaggaaac accattgtac tctggctcct 720
gggattccac atgcacaagg aaagtcattc cagtctatgt cctcaatctg gctcttgacg 780
actccttctt cctcagctgc caattcattg actctctgct ttgaagcatt gacttcctct 840
atgcatataa attaagcaaa gatattcttag gcaatgcagc aatcggtccc tatatcgacg 900
ggctgagtat cctcagtgtc attagcatgg agcactgcct gtctgtatag tggcaaagtc 960
ggtaccactg ccactaccca agaaacatgt cagctatcct atgtgcccta atctgggttc 1020
tgtcttttct catggacatc ctggattggt tcttctcagg attcctgggt gagactcatc 1080
atcatttatg gaaaaatatt gacttcatta taactgcatt tctgattttt ttatttatgc 1140
ttctctctgg ctccagtctg gccctactgc tgaggattct ttatggcttc aagaggaaac 1200
ccctgtccag gctatatatt atcatctctc tcacagtgat ggtctacctc atctgggcct 1260
gcccttggg ctttcatttt tcctgttaca                                1290

```

<210> 101
 <211> 207
 <212> PRT
 <213> Mus musculus

```

<400> 101
Leu Val Leu Ile Thr Val Leu Phe Glu Leu Ala Gly Asn Thr Ile Val
 1             5             10             15
Leu Trp Leu Leu Gly Phe His Met Thr Arg Lys Val Ile Ser Val Tyr
      20             25             30
Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Ser Cys Gln Phe
      35             40             45
Ile Asp Ser Leu Leu Ser Ile Asp Phe Leu Tyr Ala Tyr Lys Leu Ser
      50             55             60
Lys Asp Ile Leu Gly Asn Ala Ala Ile Val Pro Tyr Ile Ala Gly Leu
      65             70             75             80
Ser Ile Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val Trp Gln
      85             90             95
Met Arg Tyr His Cys His Tyr Pro Arg Asn Met Ser Ala Ile Leu Cys
      100            105            110
Ala Leu Ile Trp Val Leu Ser Phe Leu Met Asp Ile Leu Asp Trp Phe
      115            120            125
Phe Ser Gly Phe Leu Gly Glu Thr His His His Leu Trp Lys Asn Ile
      130            135            140
Asp Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu Leu Ser
      145            150            155            160
Gly Ser Ser Leu Ala Leu Leu Leu Arg Ile Leu Tyr Gly Phe Lys Arg
      165            170            175
Lys Pro Leu Ser Arg Leu Tyr Ile Ile Ile Ser Leu Thr Val Met Val
      180            185            190
Tyr Leu Ile Leu Gly Leu Pro Leu Gly Leu Ser Phe Phe Leu Leu
      195            200            205

```

<210> 102
 <211> 1389
 <212> DNA
 <213> Mus musculus

<400> 102

```
ttaaggtgat caaatatggc ctgtttttctc agggacacca ctggaagatt tttaaacatg 60
gatccaaaca tctcatccca caacacagaa tctactccac tgaatgaaac tgggtcatcca 120
aacttcagta caatactcac gctgtccttt ctgggtcctcg tcaactgtcct cgtggaactg 180
gcaggaaaca ccattgtact ctgggtcctg ggattccgca tgcacaggaa agccatctca 240
gtctatgtcc tcaatctggc tctggcagac tccttcttct gctgccattt cattgactct 300
ctgctatgga tcaactgactt catctatacc cataaattaa gcaaagatat cttacgcaat 360
gcagcaattg ttccctatat cgcaagactg agcgtcctca gtgctattag aatggagcac 420
ttactgttta tattgtggcc aatctggtac cactgccacc acccaagaaa catatcagct 480
atcctatgtg ccctaactctg ggttctgttc tttctcatgg gcatccttga ttggttcttc 540
ttaggattcc tgggtgagac tcatcatcat ttgtggaaaa atattgactt tattatacct 600
gcatttctga tttttttaat gctgctttct ggggtccactc tggccctact gctgaggata 660
ctttgtgggt ccaggaggaa actcctgtcc aggcgtgtatg ttaccatctc tctcacagtg 720
atgggtctacc tcatctgtgg catgcctctt gggctttact tgttcctgtt atactgggtt 780
gggattcatt tacactatcc ctcttgtcac atttaccaag ttactgcact cttgtcctat 840
gtggacagct ctgccaacca catcttttat ttccttgtag gtccttttag gcattttaga 900
aagcattggt ccctctaaac tattctaaag aggaccctgg agaacattcc tgaggaggat 960
gaatatacag acagctatct tcagaatacc actgagatgt cagaaatcag atgttgagag 1020
tcaacacatt aacttactct tctctcagaa acgcctcagt gattgcaacg ctttcaattt 1080
ttttgtttgt ttgggttttt tttttttgga ttgttttaaa ttaggtattt tgggtatttt 1140
catttccaaa tttatattta tacttccaaa agtcccccat accttccctt gccaatcccc 1200
taccactttt ttggccctgg cgtttccctg tactggggca tataaagttt gcaagtccag 1260
tgggcctctc tttccagtga tggcctacta agccatcttt tgatacatat gcagctagag 1320
tcaagagctc caggggtactg attaattcat aatgttgttc cacctatagg gttgcagatc 1380
cctttagca
```

<210> 103

<211> 206

<212> PRT

<213> Mus musculus

<400> 103

```
Phe Phe Cys Cys His Phe Ile Asp Ser Leu Leu Trp Ile Thr Asp Phe
 1          5          10          15
Ile Tyr Thr His Lys Leu Ser Lys Val Tyr Leu Thr Gln Cys Ser Asn
 20          25          30
Phe Pro Tyr Ile Ala Arg Leu Ser Val Leu Ser Ala Ile Arg Met Glu
 35          40          45
His Leu Leu Phe Ile Leu Trp Pro Ile Trp Tyr His Cys His His Pro
 50          55          60
Arg Asn Ile Ser Ala Ile Leu Cys Ala Leu Ile Trp Val Leu Phe Phe
 65          70          75          80
Leu Met Gly Ile Leu Asp Trp Phe Phe Leu Gly Phe Leu Gly Glu Thr
 85          90          95
His His His Leu Trp Lys Asn Ile Asp Phe Ile Ile Pro Ala Phe Leu
100          105          110
Ile Phe Leu Met Leu Leu Ser Gly Ser Thr Leu Ala Leu Leu Leu Arg
115          120          125
Ile Leu Cys Gly Ser Arg Arg Lys Leu Leu Ser Arg Leu Tyr Val Thr
130          135          140
Ile Ser Leu Thr Val Met Val Tyr Leu Ile Cys Gly Met Pro Leu Gly
145          150          155          160
Leu Tyr Leu Phe Leu Leu Tyr Trp Phe Gly Ile His Leu His Tyr Pro
165          170          175
Ser Cys His Ile Tyr Gln Val Thr Ala Leu Leu Ser Tyr Val Asp Ser
180          185          190
Ser Ala Asn His Ile Phe Tyr Phe Leu Val Gly Ser Phe Arg
```

<210> 104
 <211> 1420
 <212> DNA
 <213> Mus musculus

<400> 104
 aaaaaggaac cttacacttt tctgagttag tgtgcattca gagaatcaga cagtcttaac 60
 tgtacccctt gaggaaggt cagagatggc tgcataagg gtgcaactcc tgtgaaggat 120
 gagtgaattg tcattccttc tgccatctta gcaatccctt ggccagggtga ctgacaggta 180
 caacattgtc aactcaaggg aggakrtaaa tgyrtgtgat ccttaatcta gagcacagac 240
 cagagtcaca tmtcaaccga gagttagggg tagaaytcag aatccattct tttgatgatg 300
 aggaagtatc tttcccttaa tatgcctcaa caaaaccctg atatcatcat cttttctgtg 360
 tcattttaag ccctggggag gtaaatgtga tgcttccctt tctggagtta ccaaggtggc 420
 aggaaatgga tccaaccctg accatgaaaa aaggaaatcg tttccatgtg aattaaagat 480
 cctgagttat acacaggaag aatgatgcag actatagagt aaacacaagc tctaaatttg 540
 aatccacagt ccagaattct taatcccatg tggatcatgtt actttccttt tatttataaa 600
 tcattttatt taataatgtt gacaagaata tctatattay rttatgattg ccagaagaag 660
 ggtcagtgtt aatgtgtctc aatatggtct gtgttctcag ggacacaact ggaagatttg 720
 tgagcatgga ttcaaccatc tcacccaca acacaawac tacacaactg aatgaaactg 780
 stratcctaa ctgcagtcca atcctgacmc tgycttctc ggccctcatc actgccctgg 840
 tttgactggc agaaaacact attatactct gactcctggg attccccatg cacaggaaag 900
 ccattctcagt ctatatcctc aaccaggctc tggcagactc cttcttctc tgctgtcact 960
 tccttgactc tatgctacag atcattgact tctatggcat ctatggccat aaattaagca 1020
 aagatatctt aggcaatgca gcaatcattc cctatatcac agggctgagc gtcctcagtg 1080
 ctattagcac tgctgtctc tattgtggcc aatctggtac cattgccacc acccaagaaa 1140
 catgtcagggt atcatatgtg ccctaactct ggttctgtcc tttctcatgg gcacccctga 1200
 ttggttcttc tcaggattcc tgggtgagac tcattatcat ttgtgggaaa atgttgactt 1260
 tattataact gcatttttta tttatgcttc tctctgggtc tactcatgag gatcctctgt 1320
 ggaggaaacc cctgtccagg ctgtatgtta ccattctctc cacagtgatg ggctacctca 1380
 tctgtggcct gcctcttggg ctttacttgt ctctgttaca 1420

<210> 105
 <211> 200
 <212> PRT
 <213> Mus musculus

<400> 105
 Phe Leu Ala Leu Ile Thr Ala Leu Val Leu Ala Glu Asn Thr Ile Ile
 1 5 10 15
 Leu Leu Leu Gly Phe Pro Met His Arg Lys Ala Ile Ser Val Tyr Ile
 20 25 30
 Leu Asn Gln Ala Leu Ala Asp Ser Phe Phe Leu Cys Cys His Phe Leu
 35 40 45
 Asp Ser Met Leu Gln Ile Ile Asp Phe Tyr Gly Ile Tyr Gly His Lys
 50 55 60
 Leu Ser Lys Asp Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Ile Thr
 65 70 75 80
 Gly Leu Ser Val Leu Ser Ala Ile Ser Thr Asp Leu Ser Ile Leu Trp
 85 90 95
 Pro Ile Trp Tyr His Cys His His Pro Arg Asn Met Ser Gly Ile Ile
 100 105 110
 Cys Ala Leu Ile Trp Val Leu Ser Phe Leu Met Gly Ile Leu Asp Trp
 115 120 125
 Phe Phe Ser Gly Phe Leu Gly Glu Thr His Tyr His Leu Trp Glu Asn

130		135		140
Val Asp Phe Ile Ile Thr Ala Phe Phe Ile Val Cys Phe Ser Leu Gly				
145		150		155
Leu Leu Met Arg Ile Leu Cys Gly Gly Ile Pro Leu Ser Arg Leu Tyr				160
	165		170	
Val Thr Ile Ser Leu Thr Val Met Gly Tyr Leu Ile Cys Gly Leu Pro				175
	180		185	190
Leu Gly Leu Tyr Leu Ser Leu Leu				
195		200		

<210> 106
 <211> 730
 <212> DNA
 <213> Mus musculus

<400> 106
 tgtgatctgt gttctcaggg acaccgctgg aagcatttgt gagcatggat ccaatcatct 60
 catcccacaa cacagaatca caccactgaa tgaaactggg catcccaact gcagtccaat 120
 cctgacacca ttctttctgg tcctcatcac tgtactggg gaattggcag gggaacacca 180
 ttatactctg gctcctggga tttcgcatga acaggaaagc aatctcagtt tatgtcctca 240
 atctggctct ggcagactcc ttcttttctt ctgttgccat ttcattgact ctctgctaca 300
 gaacattgac ttcattcaatg ccataaaatt aagcaaact atcttaggaa atgcagcaat 360
 cattccctat attgcagggc tgagcctcct cagtgcattt agcatggagc actgcctgtt 420
 tatattatgg ccaatctggg accactgccca ccacatgtca gctatcatat gtgccctaata 480
 ctgggttccg tcctttctca agggcatcct caatttggtt ttctcaggat tcctgggtga 540
 gactcatcat catttggtggg aaaatattga ctttattata actgcatttc tgattttttt 600
 atttatgctt ctctgtgggt gcactttggc cctagagctg aggatactct gtggctccag 660
 gaagaaaccc ctgtccaggc tgtaagttac catctctctc acagcgatgg tctacctcat 720
 ctgtggcctg 730

<210> 107
 <211> 198
 <212> PRT
 <213> Mus musculus.

<400> 107
 Phe Leu Val Leu Ile Thr Val Leu Val Glu Leu Ala Gly Asn Thr Ile
 1 5 10 15
 Ile Leu Trp Leu Leu Gly Phe Arg Met Asn Arg Lys Ala Ile Ser Val
 20 25 30
 Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Val Phe Leu Cys Cys
 35 40 45
 His Phe Ile Asp Ser Leu Leu Gln Asn Ile Asp Phe Ile Asn Ala His
 50 55 60
 Lys Leu Ser Lys His Ile Leu Gly Asn Ala Ala Ile Ile Pro Tyr Ile
 65 70 75 80
 Ala Gly Leu Ser Leu Leu Ser Ala Ile Ser Met Glu His Cys Leu Phe
 85 90 95
 Ile Leu Trp Pro Ile Trp Tyr His Cys His His Met Ser Ala Ile Ile
 100 105 110
 Cys Ala Leu Ile Trp Val Pro Ser Phe Leu Lys Gly Ile Leu Asn Leu
 115 120 125
 Phe Phe Ser Gly Phe Leu Gly Glu Thr His His His Leu Trp Glu Asn
 130 135 140
 Ile Asp Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu Leu
 145 150 155 160

Cys Gly Cys Thr Leu Ala Leu Glu Leu Arg Ile Leu Cys Gly Ser Arg
 165 170 175
 Lys Lys Pro Leu Ser Arg Leu Val Thr Ile Ser Leu Thr Ala Met Val
 180 185 190
 Tyr Leu Ile Cys Gly Leu
 195

<210> 108
 <211> 847
 <212> DNA
 <213> Mus musculus

<400> 108
 ttccagaattc ttgatccatg tggatcatggt actcccccttt tattaataaaa tgagtacatt 60
 aagccatatt gaaaacaata tctatattat attatgattg cccgaagaag ggtcaatggt 120
 aaggtgatca aatatggcct gttttcctca gggacaccaa tgggtgattt gtttagcatg 180
 gatccaacca tctcatccca caacacagaa tcacaccact gaatgaacct ggcccatccc 240
 gactgcaatc caatcctggt tctgtccttt ctggtcctca tcgctgtcct ggtggaactg 300
 gcaggaaaca ccattgttct ctggctcctg ggattccgca tgcacaggaa acccatctca 360
 gtctatgtcc tcaatctggc tctggcagac tcctttcttc tctgtcgcca tttcattgac 420
 tctctgtctac aaatcattga cttcacctat gcccataaat taagcaaaga tatcttagac 480
 aatgcagcaa ttgttccctt tatcacaggg ctgagggtcc tcagtgtctat tagcatggag 540
 cactgcctgt ctgtattgtg gctaactctg taccactgcc accacctgag aaatatgtca 600
 gctatcctat gtgccctaata ctgggttctg tcctttctca tgtccatcct ggactagttc 660
 ttctcagaat tcctgcatga gactcatcat catttgtggg aaaatgttga ctttattata 720
 actgcatttc tgattttttt atttatgctt ctcttttaggt ccagtctggc cctactgagg 780
 aggatcctcc tgtggctcca ggaggaaata cctgtccacg ctatatgtta tcatttctct 840
 cacagtg 847

<210> 109
 <211> 192
 <212> PRT
 <213> Mus musculus

<400> 109
 Phe Leu Val Leu Ile Ala Val Leu Val Glu Leu Ala Gly Asn Thr Ile
 1 5 10 15
 Val Leu Trp Leu Leu Gly Phe Arg Met His Arg Lys Pro Ile Ser Val
 20 25 30
 Tyr Val Leu Asn Leu Ala Leu Ala Asp Ser Phe Phe Leu Cys Cys His
 35 40 45
 Phe Ile Asp Ser Leu Leu Gln Ile Ile Asp Phe Thr Tyr Ala His Lys
 50 55 60
 Leu Ser Lys Asp Ile Leu Asp Asn Ala Ala Ile Val Pro Phe Ile Thr
 65 70 75 80
 Gly Leu Arg Val Leu Ser Ala Ile Ser Met Glu His Cys Leu Ser Val
 85 90 95
 Leu Trp Leu Ile Trp Tyr His Cys His His Leu Arg Asn Met Ser Ala
 100 105 110
 Ile Leu Cys Ala Leu Ile Trp Val Leu Ser Phe Leu Met Ser Ile Leu
 115 120 125
 Asp Phe Phe Ser Glu Phe Leu His Glu Thr His His His Leu Trp Glu
 130 135 140
 Asn Val Asp Phe Ile Ile Thr Ala Phe Leu Ile Phe Leu Phe Met Leu
 145 150 155 160
 Leu Phe Arg Ser Ser Leu Ala Leu Leu Arg Arg Ile Leu Cys Gly Ser

				165					170					175			
Arg	Arg	Lys	Tyr	Leu	Ser	Thr	Leu	Tyr	Val	Ile	Ile	Ser	Leu	Thr	Val		
			180					185					190				

<210> 110
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Peptide

<400> 110
 Phe Met Arg Phe
 1

<210> 111
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Peptide

<400> 111
 Phe Leu Arg Phe
 1

<210> 112
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Peptide

<400> 112
 Asn Pro Ala Phe
 1

<210> 113
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Peptide

<400> 113
 Asn Pro Phe Phe
 1

<210> 114
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<221> AMIDATION
<222> (4)...(4)

<400> 114
Phe Met Arg Phe
1

<210> 115
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 115
Pro Asp Val Asp His Val Phe Leu Arg Phe
1 5 10

Al
concord